

⚠ 注意

- 本機內部裝有顯示器、電子元件、精密器件等，不耐震動和沖撞的零件。移動和搬運時，應精心操作。
· 千萬不要翻倒橫放。
- 移動本機前，請先切斷電源開關，從插座上拔下電源插頭，從機體上卸下電源軟線和通信用纜線。
· 不可踩踢或牽拉電源軟線和通信用纜線，否則，可造成事故和破損。
- 移動本機前，務必將座席裝置和本體裝置分離后，將十二支可調支腳調至最上面，用腳輪移動。
· 否則會造成破損或故障。
- 移動各裝置時，不可施加過份的力量。
· 否則翻倒時造成事故和破損。
- 顯示器裝置根據推動方向會翻倒。移動時應面對屏幕向左右方向推動。在斜面或臺階處移動時必須由兩個人以上進行。
· 否則翻倒時造成事故和破損。
- 移動本產時，不可強行向機體開關部位和可動部位施加過份的力量。
· 否則，可致受傷或事故，破壞機器本體。



禁止



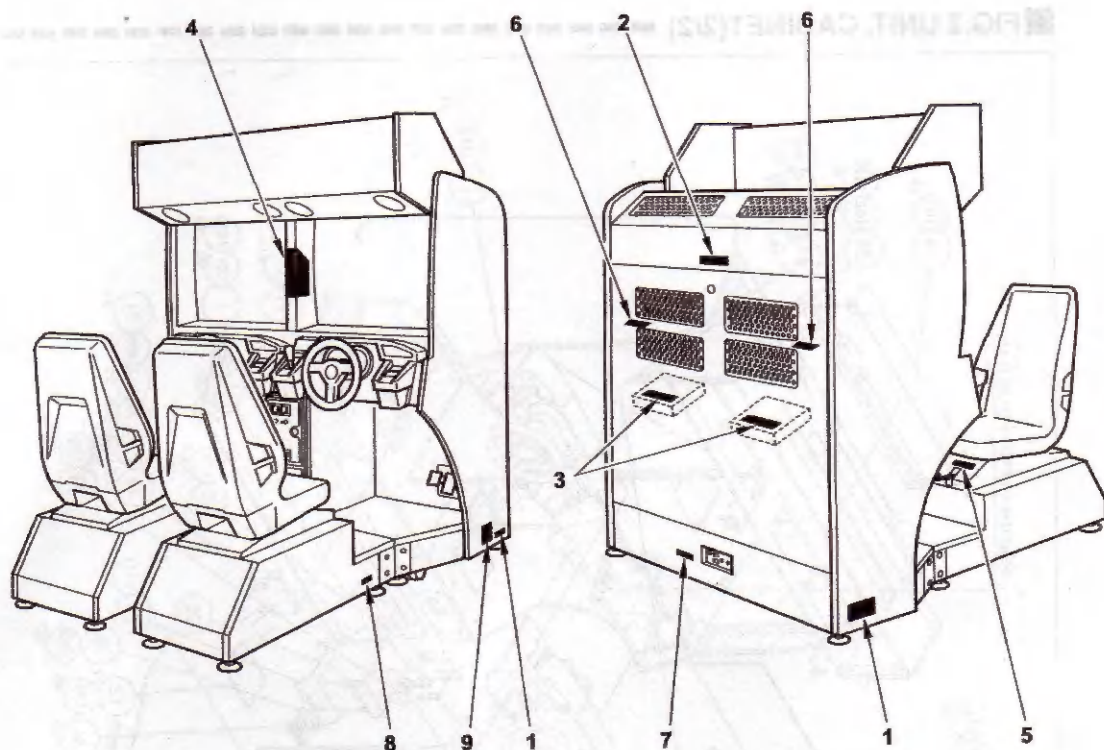
拔下電源插頭

請留意

- 本機的設置、操作、檢查、打掃、移動及搬運，請遵照本書所載步驟及內容進行，確保安全。
- 不要揭下貼在本機上的“警告”“注意”等標籤。
- 不要在相當於間接性警告或注意的狀態下，設置、操作、檢查、打掃、移動及搬運等。
- 因轉讓等，本機的所有者發生變化時，務必將本書轉交給新的所有者。

警告標籤等的張貼位置

CHINESE



警告標籤等的種類

1

⚠ WARNING

Ensure all leg levellers are securely set and game cabinet is level.

4

⚠ CAUTION

Please do not play this game if

- you have been drinking.
- you are tired and/or have been recently sick.
- you feel drowsy or unwell.
- You are susceptible to motion sickness or loss of consciousness due to noise, light or moving pictures.
- Your exercise is medically regulated.

5

⚠ KEEP FINGERS AWAY

6

⚠ HAZARDOUS VOLTAGE

7

Weight **275kg(606.4lb)**

8

Weight **40kg(88.2lb)**

9

MODEL	GMA41-TB THRILL DRIVE2
POWER	110 v / 60 Hz 500W(MAX)
MANUFACTURER	KONAMI CORPORATION
DATE OF MANUFACTURE	March, 2001
WEIGHT	355kg (782.8lb)
SERIAL NUMBER	

KONAMI.
MADE IN JAPAN
INDOOR USE

3

⚠ 注意 (ちゅうい) / CAUTION

① 設置後は必ず水平に設置してください。傾きや振動の原因になります。

② 電源を切った後、必ず電源から電源プラグを抜いてください。故障や火災の原因になります。

③ 使用後は必ず電源を切ってください。電源が切れていない状態で長時間使用すると、故障や火災の原因になります。

④ ケースの上部には、水や液体の入った容器や物を置かないでください。水分や液体が内部に入ると、故障や火災の原因になります。

⑤ 濡れた手で触らないでください。故障の原因になります。

⑥ 両端の足は、必ず指定されたものを使用してください。それ以外のものを使用したり変更することは故障の原因になります。火災や故障の原因になります。

This product should be disassembled by qualified industry specialists only. Failure to obey this warning could result in product damage, accident and injury.

Turn the power OFF and disconnect the power supply from the PCB before removing the PCB cage. Failure to do so could result in machine failure and electrical shock.

Pay careful attention when opening the PCB cage since after play, because the contents will be hot.

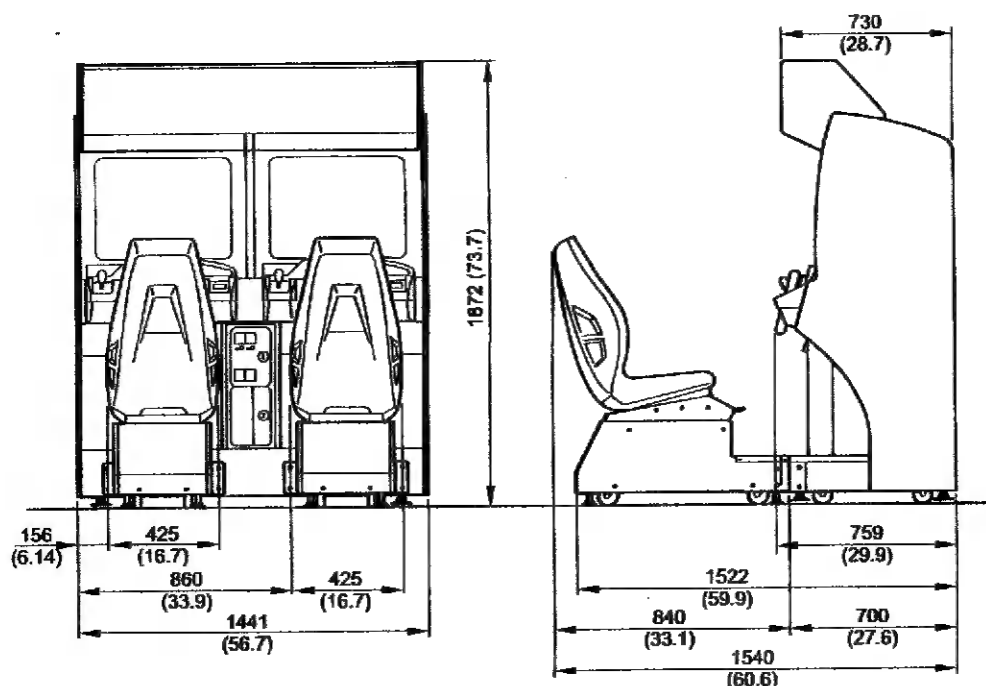
Do not place containers holding chemicals or water on or near the game machine. Electrical shock or damage could be caused by water or foreign matter entering the inside of the machine.

Do not touch this with wet hands. Doing so could cause injury and electrical shock.

When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones. Using improper parts could result in the malfunction or equipment failure.

・以上標注内容僅爲示例。
不同輸出地區，其標
注內容有所不同。

1 規 格

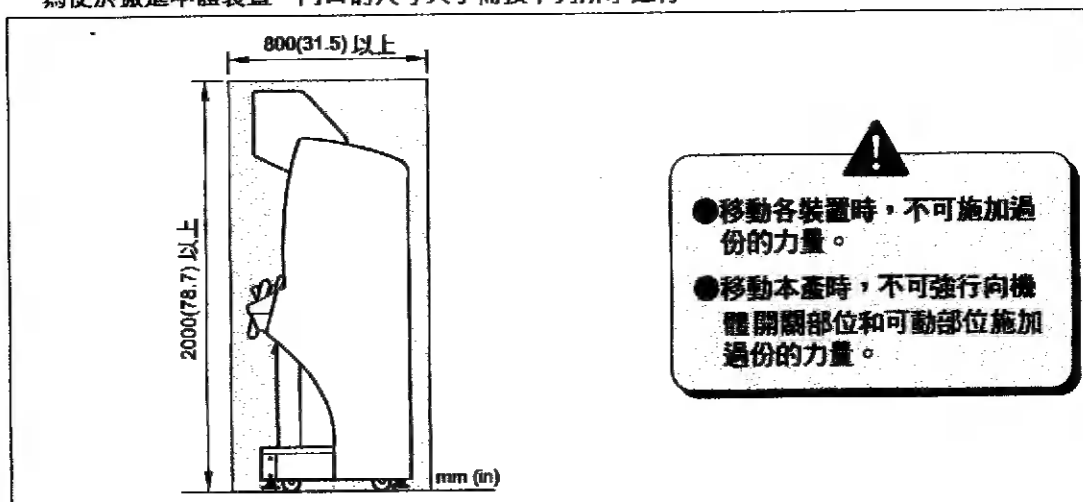


規 格	
外 形 尺 寸	參閱上圖 mm(in)
重 量	總重量 : 約 355kg (782.8lb) 本體裝置 : 約 275kg (606.4lb) 座席裝置 : 約 40kg (88.2lb)(一個)
額定消耗電力	¥GMA41-TB : 500W (MAX) ¥GMA41-HD : 395W (610VA)
顯 示 屏	29英寸顯示屏
使 用 條 件	溫度10~35℃ (50~95℉) 濕度20~80% (不可結霜)
附 屬 物 品	・ 使用說明書 本書 ・ 記憶卡 2 ・ 錢箱鑰匙 2 ・ 維修用鑰匙 2 ・ 連接件A 2 ・ 連接件B 2 ・ 連接件用固定件 (螺栓M8×35L/平墊圈/彈簧墊圈) 16 ・ 電源軟線 1 ・ 通信用纜線 1 ・ 編號標籤 1

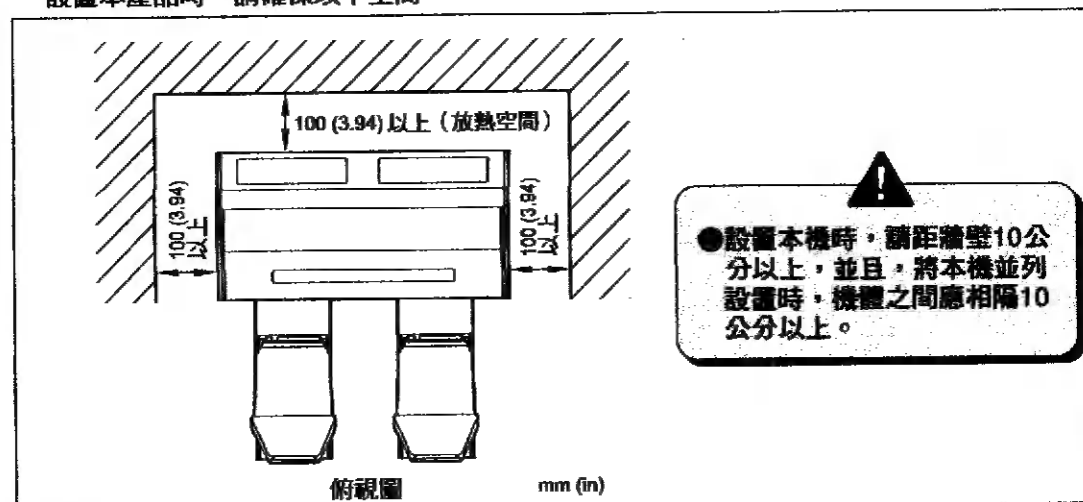
- 萬一附屬品不全或發現其他次品時，請惠詢當地的經銷店。
- 因提高產品性能等理由，本產品的規格不經預告可能有所變更。

■有關搬運與設置的尺寸

為便於搬進本體裝置，門口的尺寸大小需按下列所示進行。



設置本產品時，請確保以下空間。

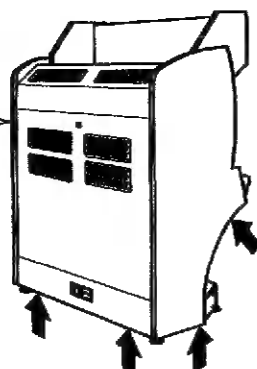


抬起本體裝置時，務請按照以下指示進行。

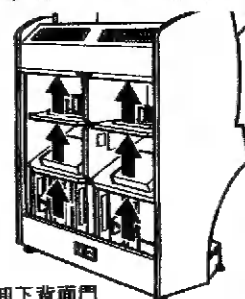
- 務請八個人以上手持裝置的底部或如圖所示位置進行搬動。(約275 kg/606.4 lb)

搬動本裝置時，絕不得使之向後傾。如此做，是極其危險的。

翻倒。



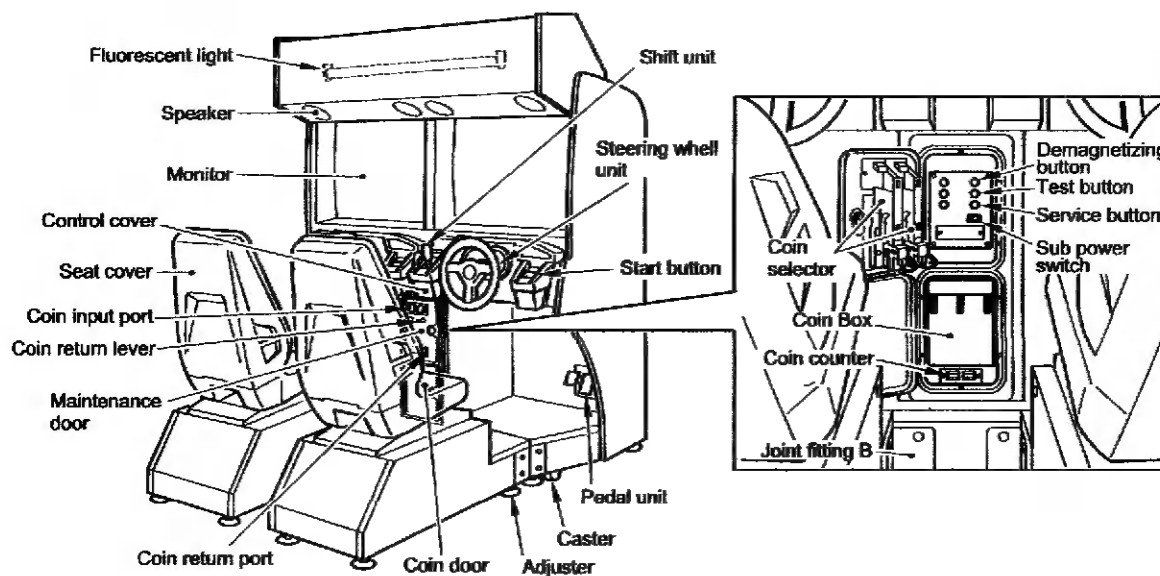
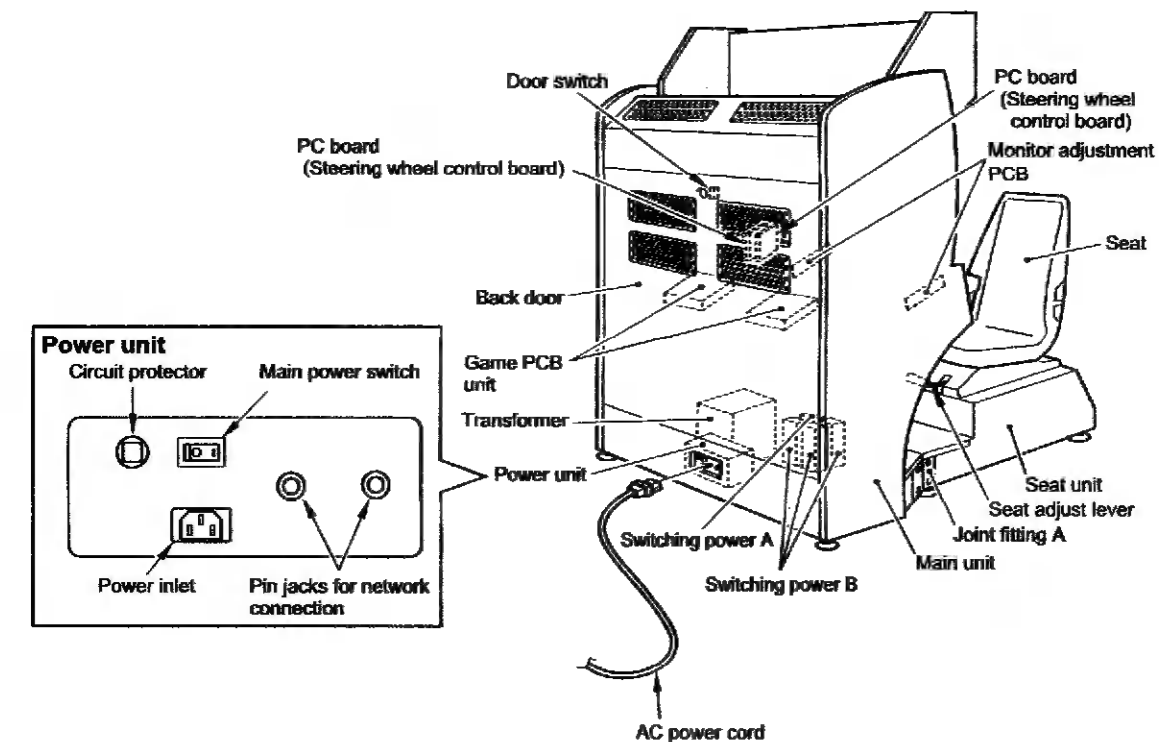
×



抬起本裝置時，不得握著控制器罩或把手。

請不要卸下背面門後，手持如圖圖式的位置。

2 Names of parts



3 How to play

"THRILL DRIVE 2" is the second version of a unique driving game with the concept "Crisis and panic management when driving". You can maneuver your car, jumping, tilting sideways, rushing up and down a cliff and doing many other terrific and comical car actions out of the real world. Try to reach the goal within the time limit. In a networked play, up to 4 players can drive in competition.

■ How to play —————

1 Put a coin(s) in the slot.

The "SELECT CAR" screen appears.

2 Choose a player car on the "SELECT CAR" screen.

Use the steering wheel to choose a car and step on the accelerator pedal or press the start button to decide it.

If the shift lever is set to neutral, the AT (automatic transmission) mode is selected.

If the lever is set to up side or down side, the MT (manual transmission) mode is selected.

·AT Gearshift is not needed during the game play.

·MT Gearshift is needed during the game play.

When the player car is decided, the "SELECT COURSE" screen appears.

3 The following courses can be selected on the "SELECT COURSE" screen.

·JAPAN

·EUROPE

·U.S.A.

When other players join the game, the course is decided by majority.

In case of a tie, priority will be given to "JAPAN", "U.S.A." and "EUROPE" in this order.

4 When the above selection is made, what has been chosen will appear on the screen and the game will start.

5 If a player reaches the finish line within the time limit or the time is up, the game is over.

When the game is over, the race results are displayed and the player's driving technique is judged by analysis graph or scores.

■ Joining the game halfway —————

Nobody can join the game halfway.

■ Continuing the game —————

Once the game is over, the player can not continue the game.

■ **KONAMI website ranking event** —————

By setting "INTERNET RANKING" on the "GAME OPTIONS" screen to "YES", the player can join the ranking event in KONAMI website.

— **Ranking-in the procedure** —

1 A password is displayed when the player reaches the goal in the one-player mode and the game is over.

2 Note down the password and access the KONAMI homepage at the following website.

http://www.konami.co.jp/am/AM_English

3 Enter the specified items and get them registered for ranking in.

·The above KONAMI website can be accessed from the player's computer or other terminal, not on the game machine.

The player is expected to pay the access cost.

The schedules and durations of ranking events will be separately introduced.
(Keep in mind that those events will not be held for some reasons.)

4 Opening and closing the doors

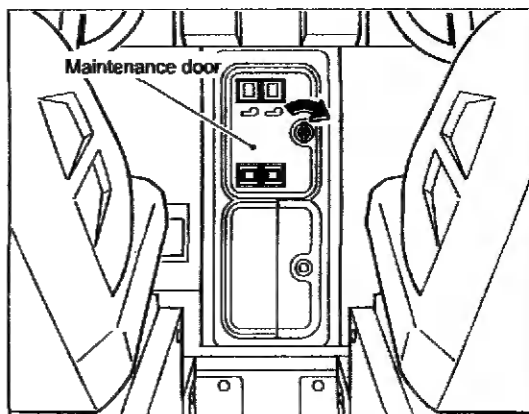
4-1 Opening and closing the maintenance door

■ How to open the maintenance door — — — — —

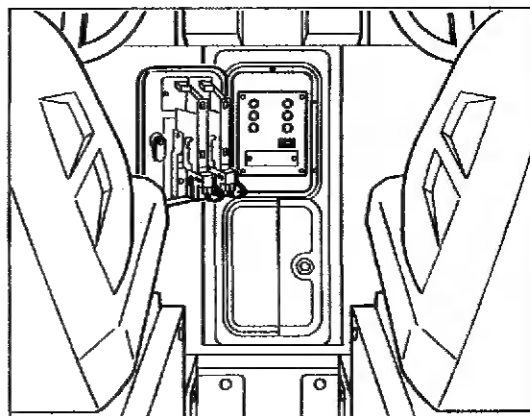


- Take care not to apply any load or impact to the maintenance door when it is open.
- After closing the maintenance door, be sure to check that the door is locked securely.

- 1 Insert the attached maintenance key in the maintenance door and turn it clockwise.



- 2 Open the maintenance door.



■ How to close the maintenance door — — — — —

- 1 Close the maintenance door.
- 2 Turn the maintenance key counterclockwise and draw it out.

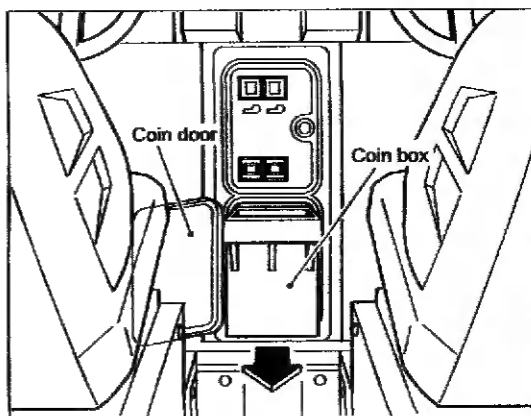
4-2 Opening and closing the coin door

■ Opening and closing the coin door and removing the coin box — — — — —



- Take care not to apply any load or impact to the coin door when it is open.
- Securely lock the door for protection against burglaries.
- Note that the coin box is considerably heavy to take out if it is full of coins.

- 1 Insert the attached coin door key in the coin door and turn it clockwise.
- 2 Open the coin door and take out the coin box.

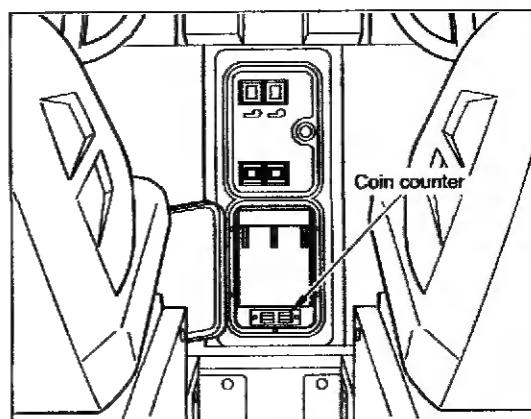


■ Coin counter — — — — —

- 1 You will find the coin box when the coin door is opened. The coin counter is located under the coin box.

•To move the coin counter onto the service panel, see page 44.

MEMO



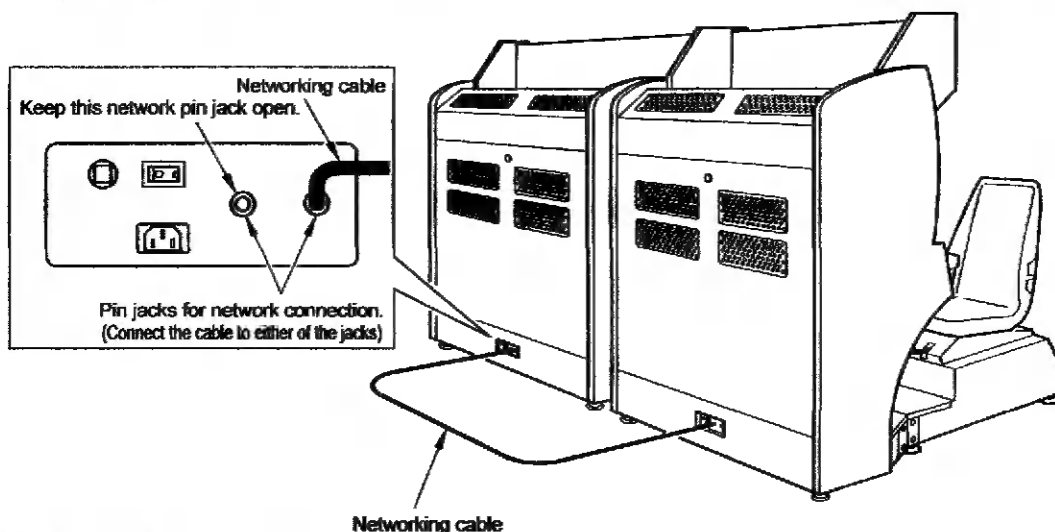
5 Networking and Game settings

5-1 How to networking the machine

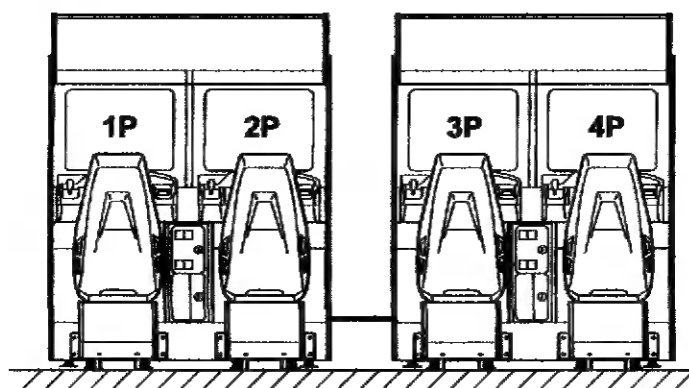
- Using two sets of this product, up to four network-compatible machines can be interconnected for networked play. To enable the networked play, connect the accompanying networking cable to the network pin jacks of the cabinet.



- When using the game machine independently, do not connect anything to the pin jack for network connection.
- For networking, leave open the not-to-be-used network pin jacks.
- The network connection pin jack is dedicated to the "THRILL DRIVE 2" machine. Never use it for any other game machines and audio-visual equipment. Be sure to employ it to interconnect the same "THRILL DRIVE 2" machines.
- Be sure to use the accompanying networking cable or the substitute cable described on page 60.
- When the machines are networked, be sure to make the "NETWORK ID" settings in the "NETWORK OPTIONS" screen on page 32. Then make sure the networking is complete.



■ Networking example



5-2 Checking the game performance

When the power switch is turned ON, the self-diagnostic test will get started. The test results will be displayed on the screen. If the machine fails to switch on, check the main power switch and the sub power switch to see if they are both on.
(See page 42) Keep in mind that the power does not turn on if the back door is not tightly closed.



- For networking, be sure to connect with the same "THRILL DRIVE 2" machine.
- Do not change the DIP switch setting of the machine to other than factory setting.
- If an abnormality persists and the machine does not operate properly, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

■ Result of self test —————

If test is OK

- The steering wheel and other components are automatically repositioned. The machine then goes to the game mode and the demonstration game gets started.

If any abnormality is detected

- "BAD" or "HARDWARE ERROR (***)" appears on the screen, and the checking is repeated.

"SYSTEM WORK BACKUP DATA ERROR" appear, press the test button on the service panel. (The device settings will be back to the factory settings.)

If "OPTION SETTINGS BACKUP DATA ERROR." and "PRESS TEST SWITCH TO INITIALIZE." appear, press the test button on the service panel.
(The settings will be back to the factory settings.)

If "RECORD BACKUP DATA ERROR." and "PRESS TEST SWITCH TO INITIALIZE." appear, press the test button on the service panel.
(The current record will be back to the factory setting.)

If "BOOKKEEPING BACKUP DATA ERROR." and "PRESS TEST SWITCH TO INITIALIZE." appear, press the test button on the service panel.
(The bookkeeping data will be back to the factory setting.)

If an abnormal display continues or the machine does not operate normally, immediately turn OFF the main power switch and contact your nearest dealer.

5-3 Repositioning the steering wheel and others

■ After the self-test, the positions of the steering wheel, accelerator pedal and brake pedal are corrected automatically.

Then "DO NOT TOUCH THE CONTROL DEVICES WHEN THE MACHINE IS BEING INITIALIZED." appears on the screen. With the message onscreen, never touch the steering wheel, accelerator pedal and brake pedal. At this time, the steering wheel turns several times clockwise and counterclockwise.

■ Result of position check —————

If test is OK

•When the position check is over, the operation mode returns automatically to the game mode.

If any abnormality is detected

The result of check is displayed as follows on the screen.

•Steering wheel abnormal

The message "DEVICE ERROR (STEERING WHEEL)" appears on the screen.
What to do The steering wheel control exceeds the correctable range or the steering wheel reaction device is out of order. Make the adjustment by referring to "7-4 Replacing and adjusting the potentiometer" in pages 48 to 50.

•Accelerator abnormal

The message "DEVICE ERROR (ACCELERATOR)" appears on the screen.
What to do The accelerator control exceeds the correctable range. Make the adjustment by referring to "7-4 Replacing and adjusting the potentiometer" in pages 51 and 52.

•Brake abnormal

The message "DEVICE ERROR (BRAKE)" appears on the screen.
What to do The brake control exceeds the correctable range. Make the adjustment by referring to "7-4 Replacing and adjusting the potentiometer" in pages 51 and 52.

If any of the above signs is displayed, press the test switch on the service panel to go to the test mode. (The "MAIN MENU" screen shows up.) Then choose "I/O CHECK" to check the device which shows the error. If the "DEVICE ERROR (****)" is still displayed after the adjustment, the device itself may be in trouble. Immediately turn OFF the main power switch, unplug the power cord and contact your nearest dealer. If the "GAME MODE" is selected on the "MAIN MENU" screen with some troubles of any devices, the game may not be played normally.

If an abnormality persists or the machine does not operate properly, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

■ Setting the time —————

If the timer is not set yet in the "BOOKKEEPING", the following message appears on the screen.

"PLEASE SET THE TIME FOR THE BOOKKEEPING"

Press the test button, and the "MAIN MENU" screen shows up instead in the test mode. Select the "BOOKKEEPING" screen and set the time. Without this setting, the above message appears each time the machine gets started.

5-4 Setting and adjustment of game mode

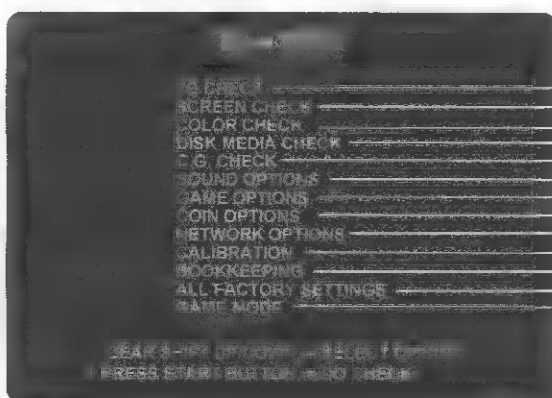
Manually make, check and change the settings for the screen displays and game contents.

Starting the test mode

- 1 Turn ON the power switch.
- 2 Press the test button on the service panel during the game mode demo (during the game mode demo of all the game machines in the case of networking).
(Hold down the test button and turn ON the power switch. The current settings are cleared and the factory settings ■ restored.)
·The main menu appears on the screen.

Quit the test mode

- 1 Choose the "GAME MODE" from the main ■ by the shift lever.
- 2 Press the start button.
·Then, the screen returns to game mode.



¥Checking ■ controls.	→ Page 27
¥Adjusting the screen distortion	→ Page ■
¥Adjusting the display color.	→ Page 28
¥Checking the ■ disk media.	→ Page 28
¥Checking the C.G. performance.	→ Page 29
¥Setting various sound options.	→ Page 29
¥Setting various game options.	→ Page 30
¥Setting various coin options.	→ Page 31
¥Setting various network options.	→ Page 32
¥Calibrating the steering wheel, etc.	→ Page 34
¥Displaying the bookkeeping information of coins.	→ Page 36
¥Returning all the settings to the factory ones.	→ Page 38
¥Returning the game mode.	

•If the time is not set yet, "> <" starts flashing around "BOOKKEEPING" to prompt you to set the system clock.

END

Selecting each mode

How to select each mode from the main ■

- SELECT → Move the shift lever up side or down side.
- SET → Press the start button.

After selecting ■ mode, refer to the page on which that mode is described in details.

5-5 Mode descriptions

- The original factory settings ■ displayed in green; the changed settings are displayed in red.
- To change the settings, move the shift lever up side or down side to select an item, and press the start button to enter it.
- After the setting change, select "SAVE AND EXIT" and press the start button. The settings ■ saved automatically and the screen returns to the main menu.
- If "EXIT" ■ selected after the modification of the settings, the following message will appear:



Select "YES" or "NO" by shift lever up side ■ down side and set it by pressing the start button.

■ "YES" ■ selected, the new settings will be saved with "NOW SAVING" displayed and the screen will return to the main menu.

If "NO" is selected, the ■ settings will not be saved with "NO MODIFICATION" displayed.

- If "FACTORY SETTINGS" is selected and the start button is pressed, all the settings of the mode will be back to the factory ones.



Checking ■

- Mode for checking the performance each control.

To return to the main menu screen, hold press the start button and ■ up side the shift lever.

Shows the voltage of the game PCB unit.

Shows the condition of each switch.

- ON The switch is on.
- OFF The switch is off.
- ERROR The switch is defective.

The marker position changes to show the input value. ADC: Value before correction from the A/D converter.

Shows the value for the steering wheel ■ decimal (hexadecimal) notation. The ■ steering wheel is set properly when it is fully turned clockwise and the red "I" mark comes to the "RIGHT" position ■ ■ ■ ■ ■ is fully turned counterclockwise and the mark comes to the "LEFT" position.

Shows the value for the accelerator pedal in decimal (hexadecimal) notation. The accelerator pedal is ■ properly when it is released and the "I" mark ■ to "MIN" ■ well ■ when ■ is fully pressed and the mark moves to "MAX".

Shows the value for the brake pedal in decimal (hexadecimal) notation. The brake pedal is set properly when ■ is released and the "I" mark moves to "MIN" as well ■ when ■ is fully pressed and the mark moves to "MAX".

Check the steering wheel reaction device by putting down side the shift lever while pressing the start button. The steering wheel turns automatically clockwise and counterclockwise by turns during checking. Then, make ■ that the "I" mark moves accordingly to the right and ■ the meter which shows the value for the steering wheel. Do not touch the steering wheel while ■ checking is conducted.

• This ■ is just ■ example.

- If the steering wheel or the accelerator pedal is not correctly adjusted, make ■ adjustment by referring to "7-4 Replacing and adjusting the potentiometer" on page ■ to 52.

SCREEN CHECK

Adjusting the screen

- Mode for checking the display.

Adjust the focus, distortion and size of the image on the screen while watching the crosshatch pattern. Use the monitor adjustment PCB to make adjustments.

To return to the main menu screen, press the start button. (See page 57)

COLOR CHECK

Adjusting the display color

- Mode for checking the display color.

Make the adjustment using the monitor adjustment PCB so that the colors of the color bars should appear properly graded and the background should become black sufficiently. Use the monitor adjustment PCB to make adjustment. (See page 57)

To return to the main menu screen, press the start button.

DISK MEDIA CHECK

Checking the media

- Mode for checking II disk media

In this mode, the disk media check sums are checked one after the other. "OK" appears on the screen when not in trouble: "BAD" if in trouble. When the machine is put into this mode, tilt down the shift lever to start checking automatically.

Press the start button to interrupt checking or return to the main menu



Counts down from "100".
Checking is complete when "0".

When the disk media have been completely checked, "OK" appears.

DISK MEDIA CHECK OK

- anything wrong is in the check results, "BAD" appears.

DISK MEDIA CHECK BAD

- If "BAD" appears, immediately turn OFF the main power switch, unplug the AC power cord from the receptacle and contact your nearest dealer.

C.G. CHECK

Checking C.G. performance

Mode for checking the function of the C.G..

Watch the in this mode to make sure the images appear correctly.

To return to the main screen, press the start button.



Two cubes are rotating entangled each other.

Another cube is shown coming up the foreground and down background and rotating alternately opaque and translucent.

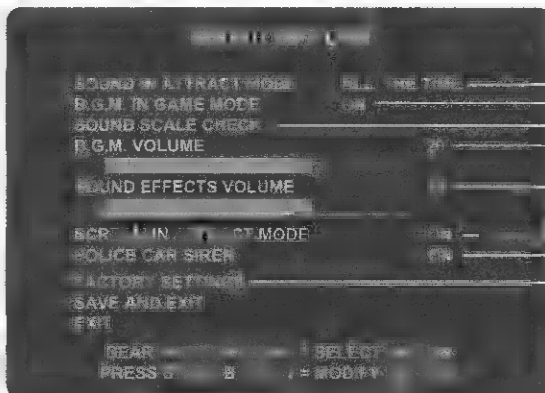
SOUND OPTIONS

Setting various sound options

Mode for setting and checking the sound options.

Move the shift lever up side or down side to select item, and press the start button to enter it.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.



•This is just an example.

Turns on and off the demo play sound.

- ALL THE TIME Sound always on.
- ONCE EVERY 4 CYCLES Sound on every 4 cycles.
- COMPLETE OFF Sound always off.

Turns on and the background music during game.

- ON Background music on.
- OFF Background music off.

You a "do-re-mi..." musical scale from the speaker first and then from the right speakers. This is repeated twice. (The second round is given sound effects.)

Adjusts the background music volume from (mute) to 30 (maximum).

- To raise the sound level, hold press the start button and move up side the shift lever.
- To lower the sound level, hold press the start button and move down side the shift lever.

Adjusts the sound volume level from (mute) 30 (maximum).

- To raise sound level, press the button and move up side the lever.
- To lower the sound level, hold press the start button and move down side the shift lever.

Sets whether shouting is or off during the attract mode.

- ON Shouting is heard.
- OFF No shouting is heard.

Sets whether the siren is on or off during the game.

- ON Siren is heard.
- OFF No siren is heard.

Press the start button to clear all the settings in this mode back factory settings.

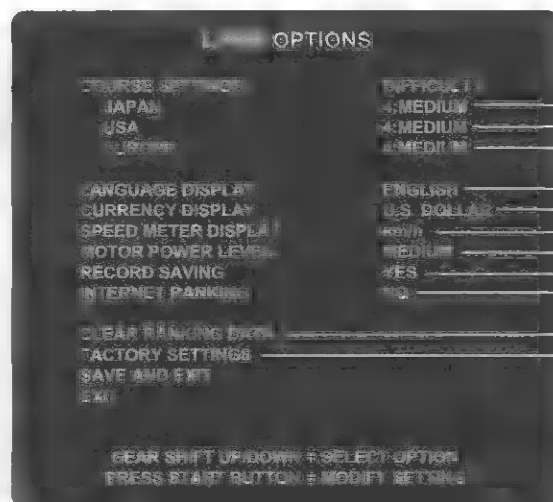
GAME OPTIONS

Setting various game options

- Mode for setting and checking the game options.
Move the shift lever up side or down side to select an item, and press the start button to enter it.
To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.



•When networking machines, be sure to set all the machines to the settings. (except for "NETWORK ID" settings in "NETWORK OPTIONS" screen)



•This screen is just an example.

Sets a difficulty level for each mode. (from the 8 levels.)

- 1:EASIEST
- 2:VERY EASY
- 3:EASY
- 4:MEDIUM
- 5:MEDIUM HARD
- 6:HARD
- 7:VERY HARD
- 8:HARDEST

Easier
↑
Standard
↓
Harder

The on-screen display appears only in English, not selective for any other languages.

Sets unit of currency appearing on the screen.
•U.S. DOLLARCurrency of U.S.A.
•H.K. DOLLARCurrency of HONGKONG

Selects the speed meter display. [km/h] or [MPH]

Sets the return force of the steering wheel.
•OFF.....No return force
•POWERLESSWeak
•MEDIUM.....Standard
•POWERFULL.....Strong

Sets whether to take or not the course record.
•YES...Takes initializes the record.
•NO.....Does not take and initialize the course record.

Sets whether to provide or not the Internet ranking.
•YES...The Internet ranking password is displayed when the current play is over.
•NO.....No password is displayed even when the game

Clears the ranking data.

Press the start button to clear all the settings in this mode back to the factory settings.

COIN OPTIONS

Setting various coin options

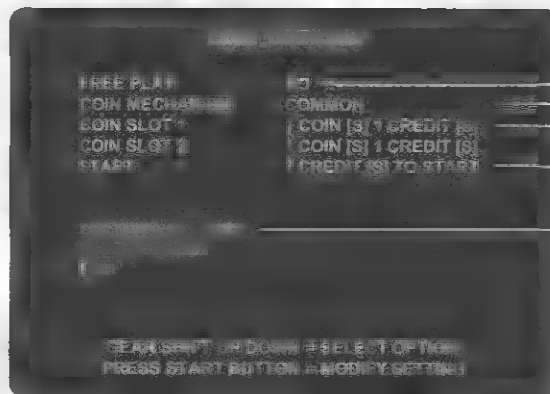
■ Mode for setting and checking the coin options.

Move the shift lever up side or down side to select an item, and press the start button to enter it.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.



•The coin setting options are not displayed when "FREE PLAY" is set to "YES". In such case, remember the game will be free.



•This screen is just an example.

Selects a free play.

•YES.....Available for free play.

•NO.....Not available for free play.

Sets the credits of coin slots common or independent when two or more coin slots are available.

•COMMON.....When two or more coin slots are available, their credit is common.

•INDEPENDENT....The credit of each coin slot is independent.

Sets the number of credits for a coin.

(16 COINS 1 CREDIT to 1 COIN 1 CREDIT.)

Sets the number of credits required to start the game.

(1 CREDIT to 16 CREDITS.)

Press the start button to clear all the settings in this mode back to the factory settings.

NETWORK OPTIONS

Setting various network options

- This mode is used to set the network ID and to check the networking condition of each networked machine.

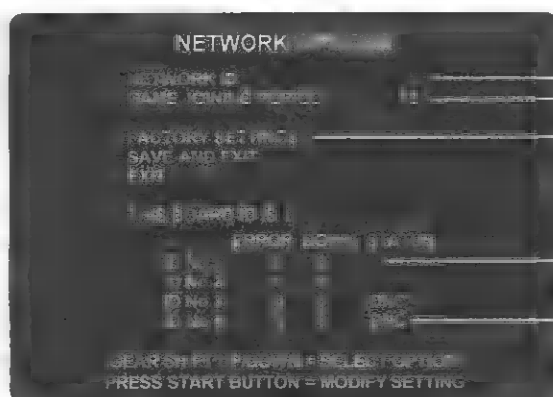
When the machines have been networked, be sure to check the networking condition on this screen.

Move the shift lever up side or down side to select an item, and press the start button to enter it.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.



- When networking the machines, be sure ■ set all the machines to the ■ settings. (except for ■ "NETWORK ID" settings in the "NETWORK OPTIONS" screen)
- If any of the three items responds incorrectly, it indicates possible communication malfunction.
- If the machine still shows ■ same trouble ■ any troubles ■ are not discussed in this manual, immediately turn OFF the main power switch, unplug the power cord and contact your nearest dealer.



• This screen is just an example.

- Shows network ID.
- Enters different numbers (machine numbers) to the monitors of the machines that will be networked.
- Sets the waiting time for networking. Choose from 8, 12, 16, 20, 24, ■ and 32 seconds.
- Press the start button to clear all the settings in this mode back to the factory settings.
- The current network conditions appear. The "I" mark is moving from left to right when the machine is networked.
- "DNC" (Did Not Connect) appears if the machine is not networked.

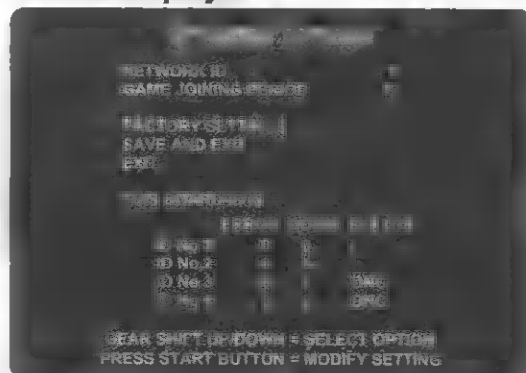
Check items (Watch ■ screen for longer than 1 minute and ■ following 3 conditions ■ met.)

- Check that the "I" mark in the STATUS column is moving from the left to the right at a fixed speed.
- Check that the value in the ERROR column is below "10" after one minute.
- Check that the value in the DOWN column does not change from "0".

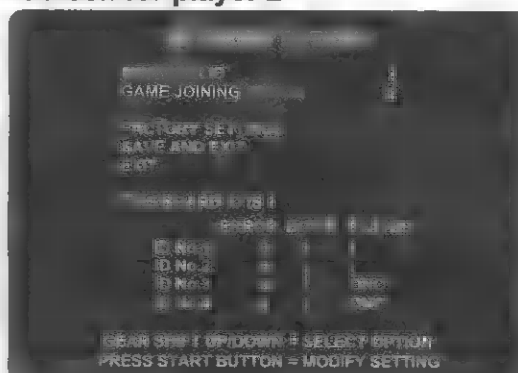
■ Screen display when game machines are networked —————

•Two machines are networked. (2-P PLAY)

Screen for player 1

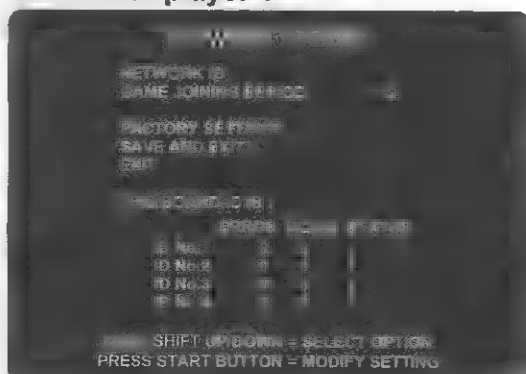


Screen for player 2

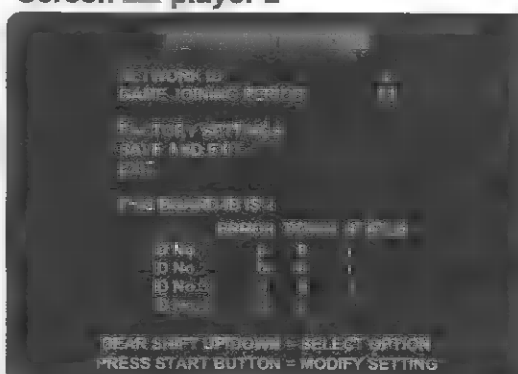


•Four machines are networked. (4-P PLAY)

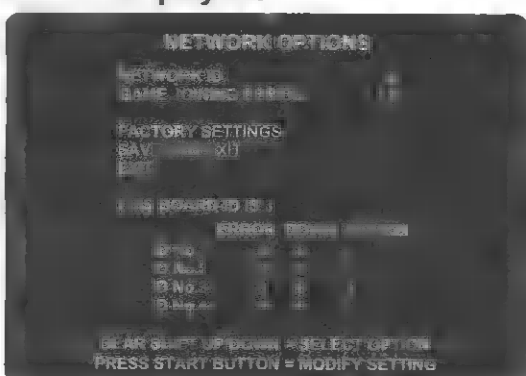
Screen for player 1



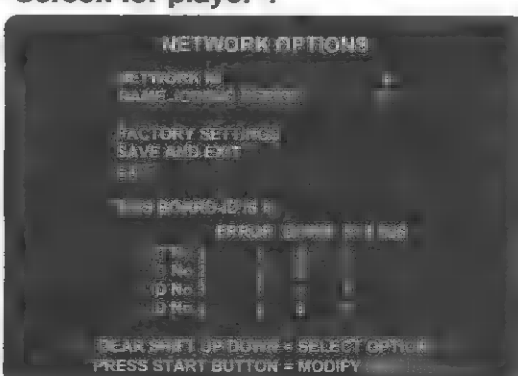
Screen for player 2



Screen for player 3



Screen for player 4

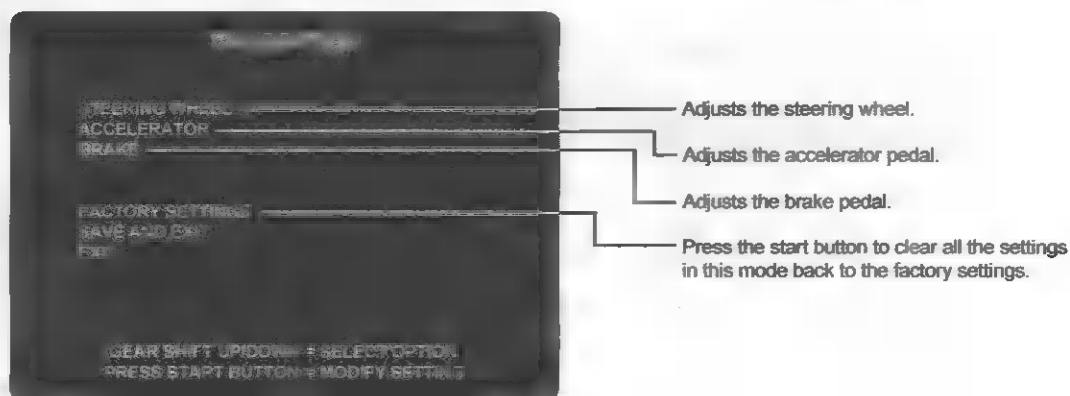


•This screen is just an example.

CALIBRATION

Calibrating the steering wheel, etc.

- Mode for calibrating the steering wheel, accelerator pedal and brake pedal.
When "DEVICE ERROR (****)" appears in the self-test during system start-up, make the calibrations in this mode.
Move the shift lever up side or down side to select an item, and press the start button to enter it.
To return to the main menu screen, select "EXIT" and press the start button.



•This screen is just an example.

- For the details of calibration of each device, see next page.
- When the calibration is performed and "ERROR" appears, follow the "7-4 Replacing and adjusting the potentiometer" on page 48 to 52.
- Press and hold the test button and turn ON the power switch, the current correction value is also cleared.

MEMO

•To calibrate steering wheel

Adjust the potentiometer so that the input value is not off-scale on the "I/O CHECK" screen when fully steering to the right and left. The input value, ranging from 0 to 65535, becomes 0 or 65535 when off-scale.

Choose "STEERING WHEEL" and press the start button so that the  shown below appears.

Follow the instructions on the screen to make the steering wheel calibration.

At first,  following message appears. Set  steering wheel to center (straight run) and press the start button.



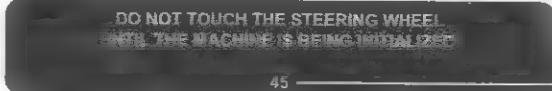
Then, the following message appears. Turn the steering wheel fully counterclockwise and press the start button.



Next, the following message appears. Turn the steering wheel fully clockwise and press the start button.



When the following message appears, release your hands from the steering wheel.



The time to finish calibration is displayed here.

When the calibration is finished correctly, "OK" appears.



In the event of a calibration error, "ERROR" appears. If "ERROR" is still displayed, contact your nearest dealer.



•To calibrate accelerator pedal brake pedal

For the accelerator pedal and brake pedal, adjust the potentiometer so that the input value is not off-scale on the "I/O CHECK" screen when stepping all the way on the pedal or releasing it.

The input value, ranging from 0 to 65535, becomes 0 or 65535 when it comes to the limit.

Choose "ACCELERATOR" or "BRAKE" and press the start button. The messages shown below appear.

Follow  instructions on the screen to make the calibration. (The figures below are for "ACCELERATOR" selected.)

At first, the following message appears. Never touch the accelerator pedal.



Then, the following message appears. Step fully on the accelerator pedal and press the start button.



Next, the following message appears. Release your foot from the accelerator pedal.



When the calibration is finished correctly, "OK" appears.



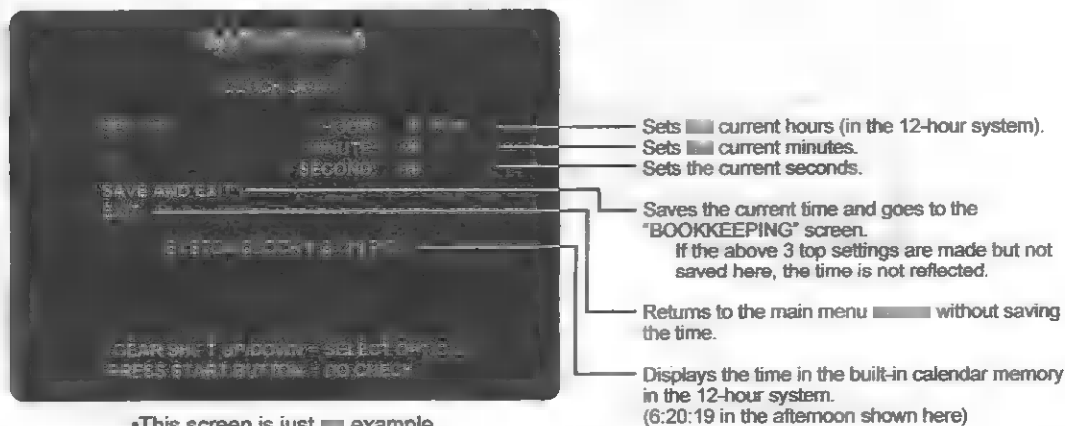
In the event of a calibration error, "ERROR" appears. If "ERROR" is still displayed, contact your nearest dealer.



BOOKKEEPING

Displaying the bookkeeping information of coins

- Mode for displaying the total data on the number of coins put in the machine.
If the time is preset on the "CLOCK SETUP" screen, the total data on the number of coins put into the machine can be checked.
To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.

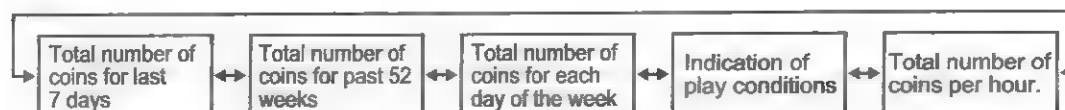


•This screen is just an example.

- Just when the machine has been set up or initialized, the time in this screen.
- When the time setting has been modified, the bookkeeping information is automatically cleared. With the current time not set, the total of received coins and other bookkeeping data are not displayed. (The data once erased can not be resumed.)

MEMO

- When the time has been preset on the "CLOCK SETUP" screen, as shown on the preceding page, the following each "BOOKKEEPING" is displayed on the screen. Each time the shift lever up and down, the screen changes as follows.
To return to the main menu screen, press the start button on each screen.



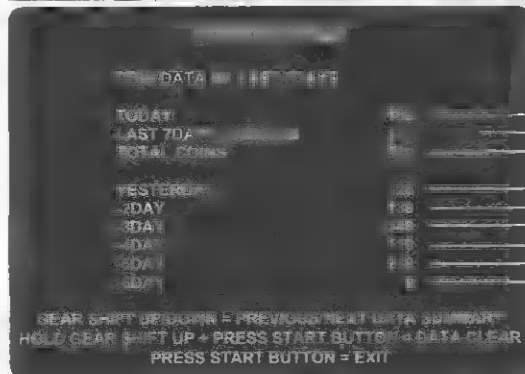
With the current time already set, the current time and the total coin data can be cleared by moving up the shift lever and pressing the start button on each screen. In such case, "DO YOU WANT TO CLEAR ALL BOOKKEEPING DATA? YES/NO" appears. Moving the shift lever up or down, select "YES" or "NO" and press the start button.

If "YES" is selected, the question for re-confirmation appears on the screen.

If "YES" is selected again, all the bookkeeping data is deleted and "CLEAR COMPLETED" appears on the screen, the data is saved as was set at the time of shipment and the main menu appears again automatically.

If "NO" is selected, "NO MODIFICATION" is indicated and the main menu appears again without deletion of the data.

the total number of [] for [] 7 days

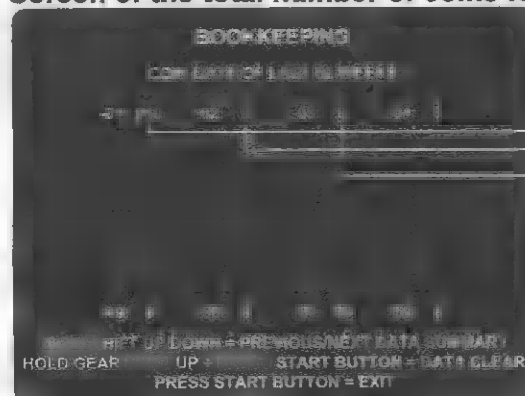


- Number of coins of today.
- Average number of coins of last 7 days.
- Total number of coins after the time being set.
- Number of coins of yesterday.
- Number of coins of 2 days ago.
- Number of coins of 3 days ago.
- Number of coins of 4 days ago.
- Number of coins of 5 days ago.
- Number of coins of 6 days ago.

"0" appears for [] day whose data is not totalized.

•This [] at left is just an example.

Screen of the total number of coins for past 52 weeks

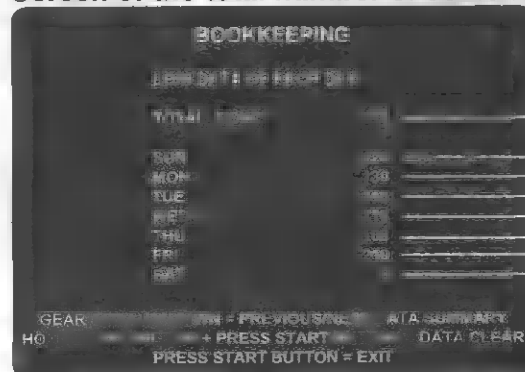


- Number of coins of 1 week before.
- Number of coins of 2 weeks before.
- Number of coins of 3 weeks before.

"0" appears for the week whose data is not totalized.

•This screen at left is just an example.

Screen of the total number of coins for each day of the week

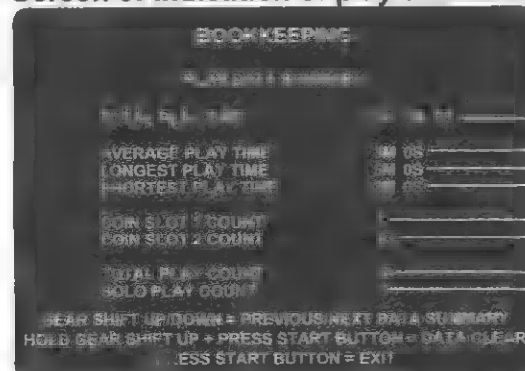


- Total number [] coins after the time being set.
- Number of coins for Sunday.
- Number of coins for Monday.
- Number of coins for Tuesday.
- Number of coins for Wednesday.
- Number of coins for Thursday.
- Number of coins for Friday.
- Number of coins for Saturday.

"0" appears for [] day of the week whose data is not totalized.

•This screen at left is just an example.

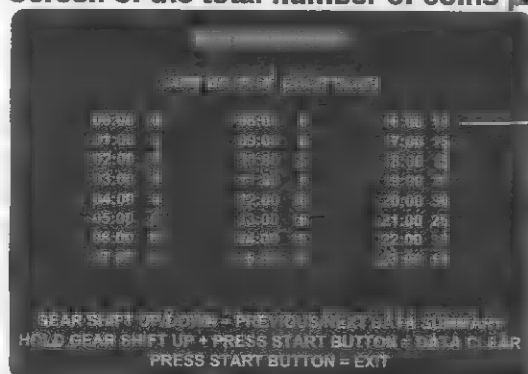
Screen of indication of play conditions



- [] play time since the setting of time.
- Average play time.
- Longest play time.
- Shortest play time.
- Total count for coin slot 1.
- Total count for coin slot 2.
- Total number [] coins since the setting of time.
- Total number of coins for solo play.

•This screen [] is just [] example.

Screen of the total number of coins per hour.



— Total number of coins per hour.

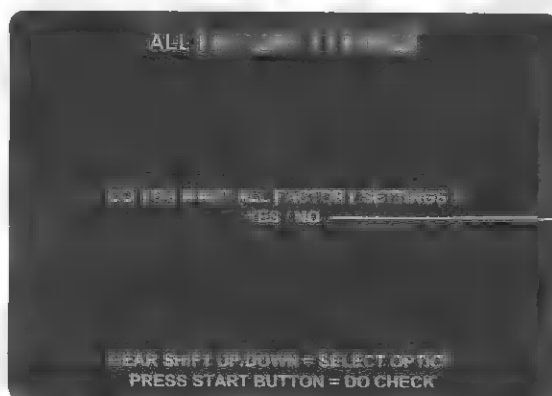
"0" appears for the hour whose data is not totaled.

•This [] at left is just an example.

ALL FACTORY SETTINGS

Returning all the settings to factory ones

- Mode of returning all the settings of each mode to their factory settings.
Move the shift lever up or down to select "YES" or "NO". Press the start button to enter the decision.
When "YES" is selected, you are requested to confirm it. When "YES" is selected again, all the settings of each mode will be returned to their factory settings with "NOW SAVING" appearing on the screen. The main menu screen will then show up itself.
If "NO" is selected, "NO MODIFICATION" is indicated and the main menu appears again without saving the data of changed settings.



— When "YES" is selected, you are requested to confirm it.

•This screen is just an example.

Mode for returning to factory settings

- SOUND OPTIONS
- GAME OPTIONS
- COIN OPTIONS
- NETWORK OPTIONS
- CALIBRATION
- BOOKKEEPING

6 Installation and assembling

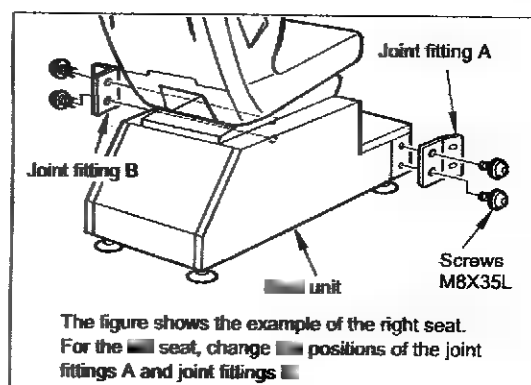
6-1 Mounting the seat unit

■ How to mount the ■ unit

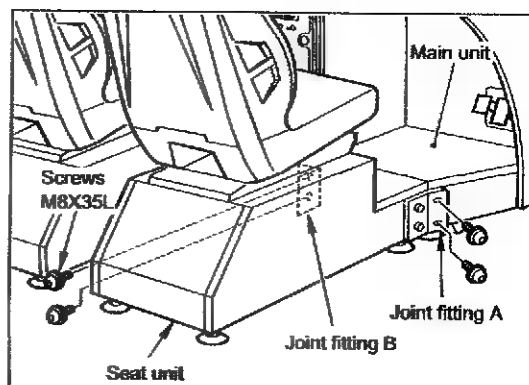


- When moving the units, use care not to apply undue force to opening and closing parts as well as moving parts.
- When installing the main unit ■ and seat unit take care not to catch the your hand.

- 1** Fix the attached joint fittings A and joint fittings B temporarily to the seat unit.



- 2** Fit the main unit and the ■ seat units and temporarily fix the joint of the main unit.



- After finishing the "6-2 Fastening ■ adjusters" on page 40, tighten the joint securely.
- The connectors existing between ■ main unit and the seat unit will not be used here. Push them into ■ main unit.

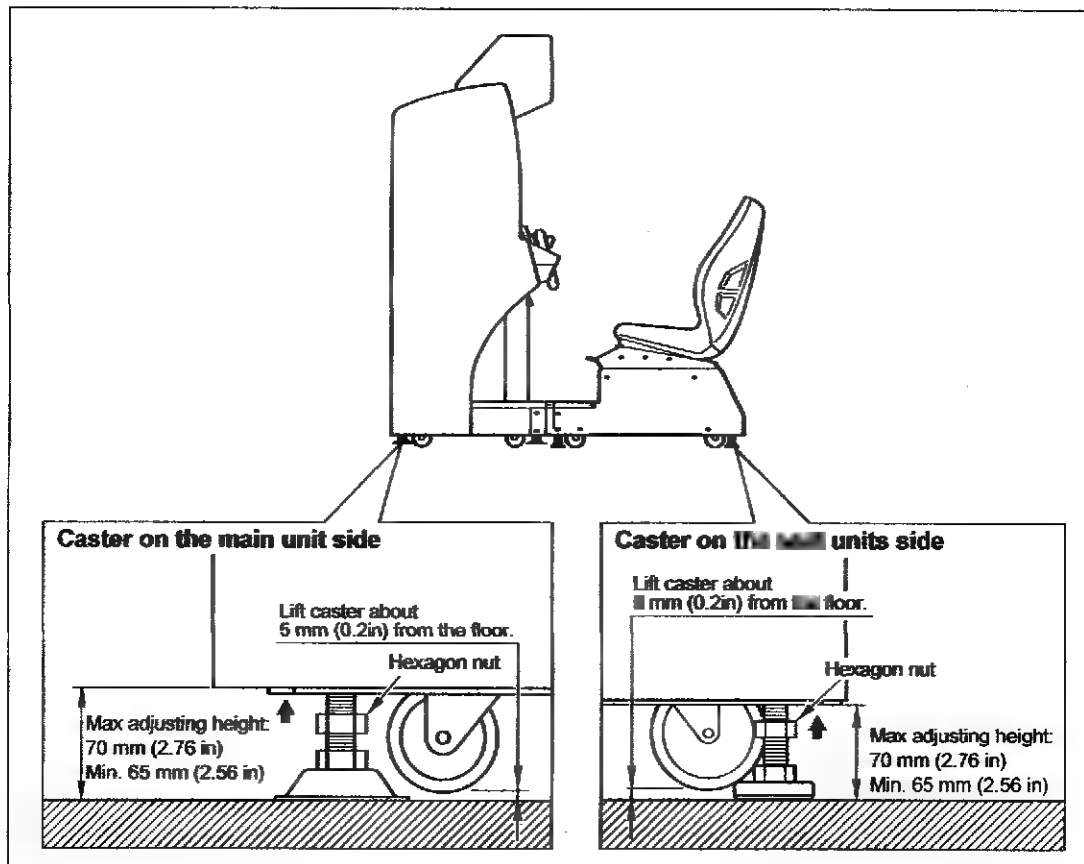
MEMO

6-2 Fastening the adjusters

■ How to fasten the adjusters



- Adjust the adjusters so that the casters **do not** touch the floor. Take care not to exceed the maximum adjusting height of the adjuster.
- Make all the unit 12 adjusters come in contact with the floor, tighten them with hexagon nuts after making sure that all the units are placed stably in a horizontal position.

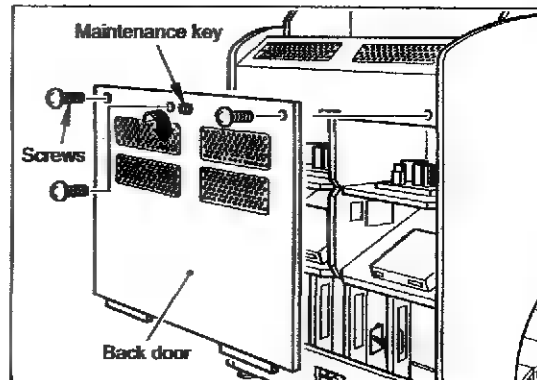


6-3 Setting the memory card

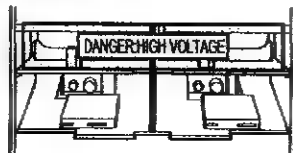
■ How to set up the memory card

- Before setting the memory card, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.
- If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.

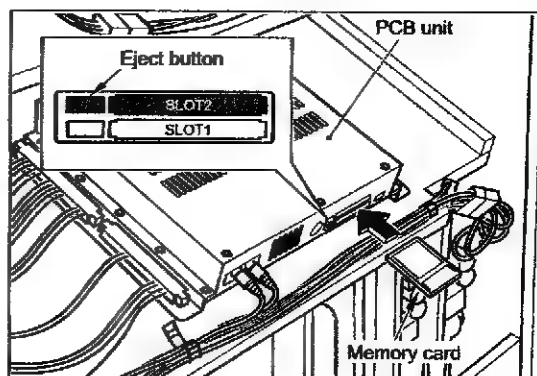
- 1 Make sure that the main power switch is turned OFF and the AC power cord is unplugged.
- 2 Remove the screws of the back door.
- 3 Insert the attached maintenance key, turn it clock wise and remove the back door.



• Never touch any part over the "DANGER: HIGH VOLTAGE" area shown below.



- 4 Insert the memory card of this kit in the upper slot (SLOT2) of the PCB unit on both the 1P and 2P sides. Be careful not to turn the card upside down.



• The memory card is used for the 1P and 2P sides.

- There are two memory card slots in the PCB unit. Be sure to insert the memory card, with the printed side up, deep into the upper slot (SLOT2). With the card in, make sure the eject button beside the slot is out.
- For both the 1P and 2P sides, be sure to insert the memory card of this kit in the slot.

MEMO

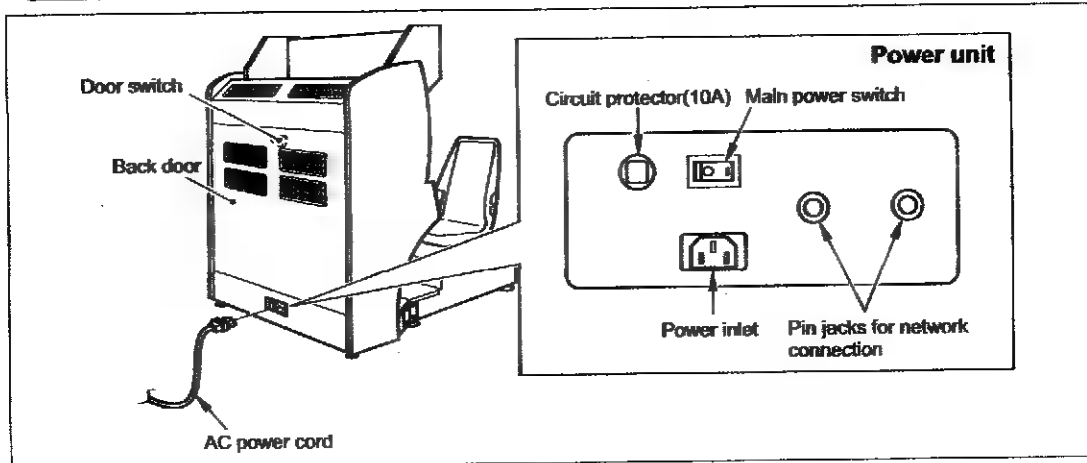
- 5 Fit the back door back in position. Lock the door with the maintenance key.
- 6 Fix the back door tightly with the three screws. (Loose screws may activate the door switch, which keeps off the power.)

6-4 Power unit

■ Power unit

The power unit is located on the back of main unit.

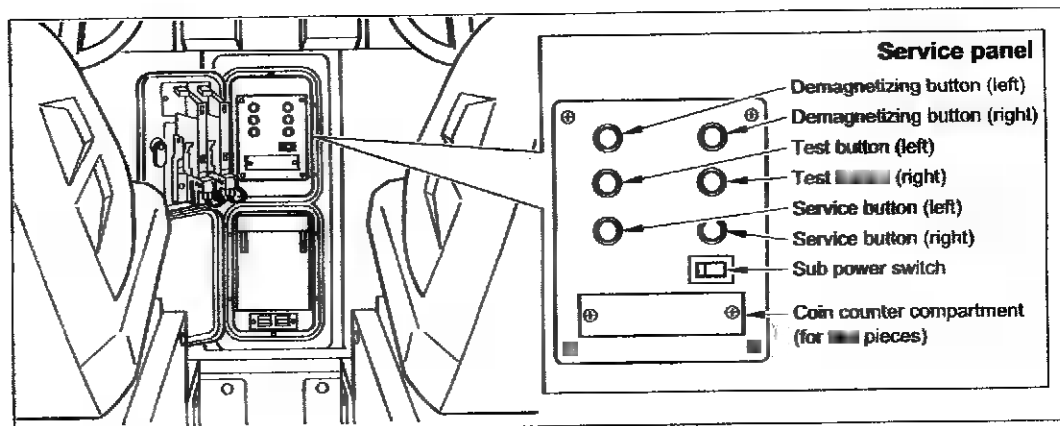
- Be sure to use the attached AC power cord.
- Be sure to ground to the machine. Never connect the grounding wire to gas pipe, water pipe or telephone ground terminal.
- There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.
- If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.



6-5 Service panel

■ Service panel

Using the accompanying maintenance key, open and detach the maintenance door to access the service panel inside.



6-6 Splitting into and moving of units

■ How to separate the units

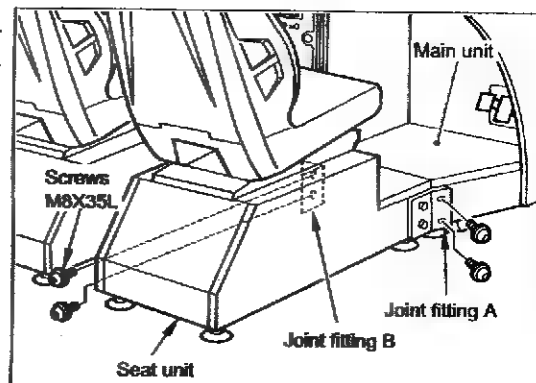
The machine can be divided into the units.



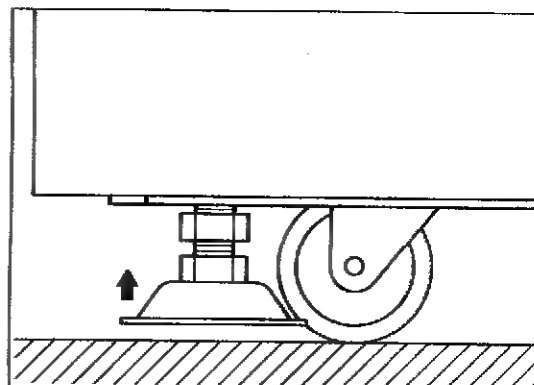
- Before separating the units from the machine, be sure to turn OFF the main power switch and remove the power cord plug from the receptacle.
- Before moving the machine, be sure to turn OFF the main power switch, unplug the power cord, from the receptacle and remove the power cord and networking cable from the machine.
- Before moving the machine, fully screw up all adjusters. Move the machine on the casters.
- When moving the units, use care not to apply undue force to opening and closing parts as well as moving parts.
- When connecting the separated units, take care not to catch the your hand between the units.

■ Separating the cockpit unit and the screen unit

- 1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Disconnect the main unit side of the joint fitting A and joint fitting B.



- 3 Raise all the adjusters and move the units on the casters.



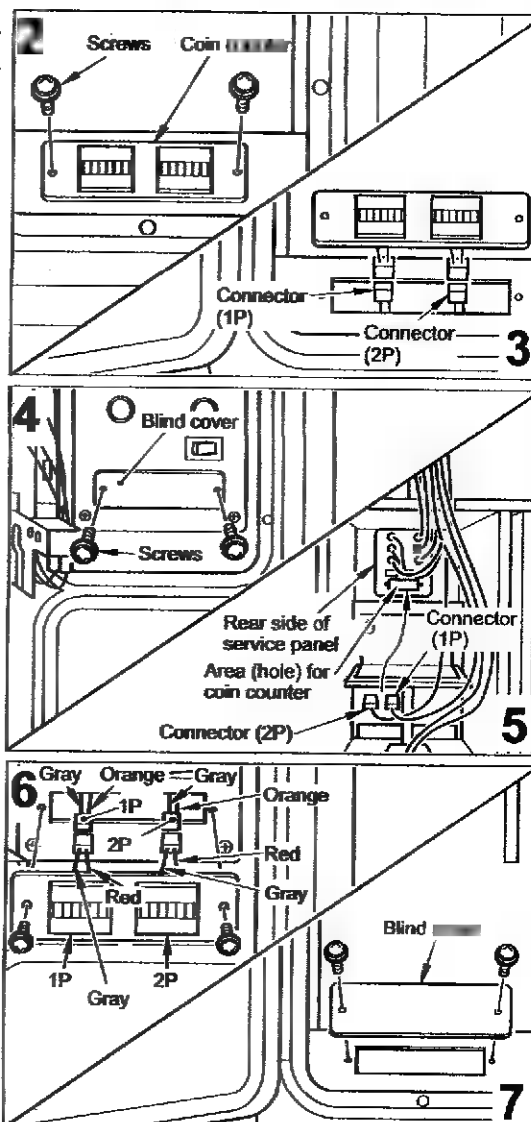
6-7 Moving the coin counter

The coin counter was installed in the coin box when the machine left the factory, but it can be moved onto the service panel.

■ How to move the coin counter

- Before moving the coin counter, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.
- If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- When the back door is closed, be sure to fix it with the 3 screws.

- 1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Open the coin door and remove the screw securing the coin counter.
- 3 Taking out the coin counter, disconnect the two connectors.
- 4 Open the maintenance door and unscrew the blind cover to remove it from the service panel.
- 5 Remove the back door of the main unit (see Steps 2 and 3 on page 48). Move the two connectors to the service panel.
- 6 Connect the connector and secure the coin counter with the screw.
- 7 Screw down the blind cover (removed in Step 4 above) in the position where there was the coin counter behind the coin door.



7 Maintenance

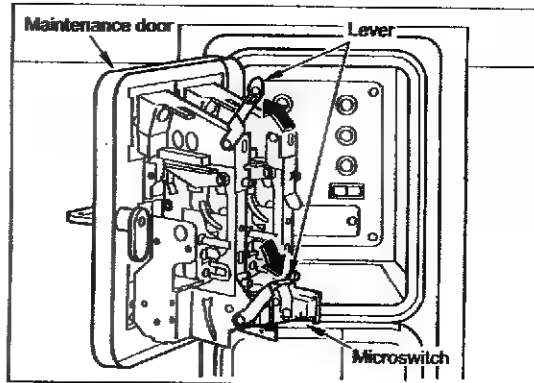
7-1 Replacing the coin selector

How to replace the coin selector

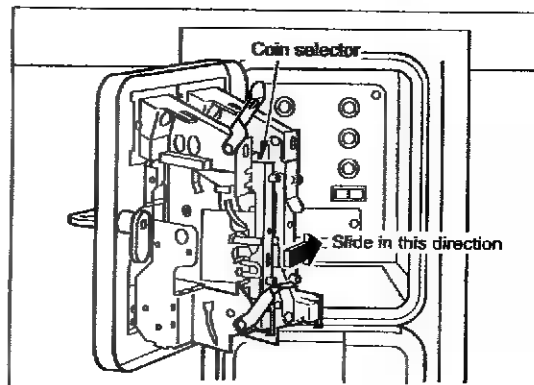


- Before replacing the coin selector, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- Take care not to apply any load or impact to the maintenance door when it is open.
- After closing the maintenance door, be sure to check that the door is locked securely.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

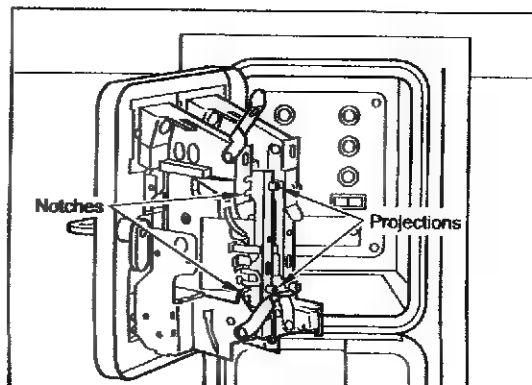
- 1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Open the maintenance door.
- 3 Release the levers that fix the coin selector. See right.



- 4 Slide the coin selector to the right, and take it out.



- 5 To fit a new coin selector
Fit the 2 projections of the coin selector to their mating notches.
- 6 Lock the levers (in Step 3 above) again, and close the maintenance door.



7-2 Replacing the fluorescent light

How to replace the fluorescent light

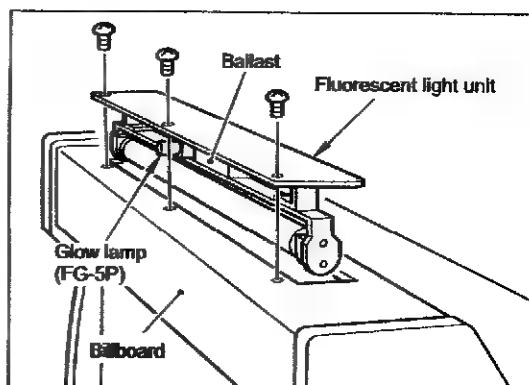


- Before replacing the fluorescent light, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- The fluorescent light is hot just after the power switch is turned off. Wait until it cools down and then replace it with a new one of the same type (straight tube 32W/100V white).
- When detaching and reattaching the fluorescent light unit, be careful not to damage the wires between this unit and the main unit.
- When replacing the fluorescent light, use a stepladder for safety sake.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.

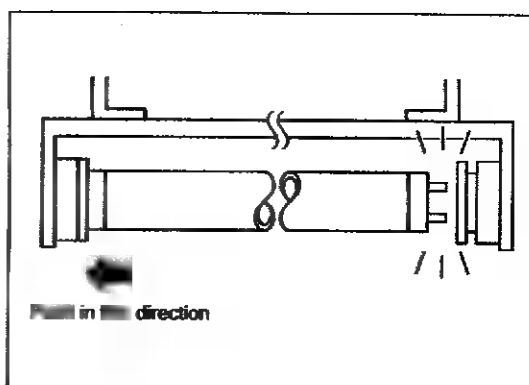
2 Remove the fluorescent light unit lock screws off the top of the billboard.

3 Lift the fluorescent light unit off position. Be careful not to hit against the ballast.



4 Push one end of the fluorescent light in the direction of the socket. The other end of the fluorescent light will be detached from the opposite socket.

5 Install a new fluorescent light in the reverse order.



It is recommended that the glow lamp should also be replaced.

MEMO

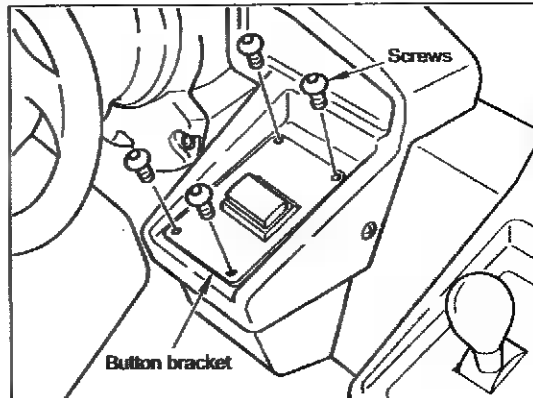
7-3 Replacing the start button

■ How to replace the start button

- Before replacing the button, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

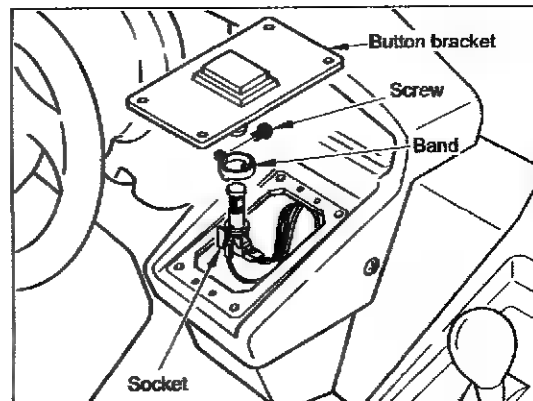
1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.

2 Remove the screws and detach the button bracket.

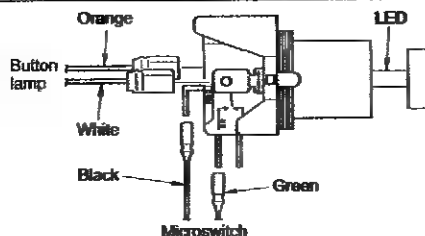


3 Remove the button and detach the band from the button socket.

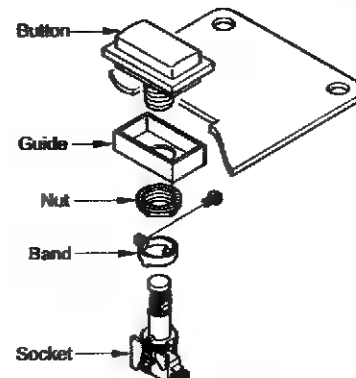
4 Draw the socket out of the button.



5 Take the reverse steps to install the button into position. If the socket has been replaced, reconnect the cables as shown below.



The terminals on the LED PCB are marked with (+) and (-). Be sure to connect the orange wire to the (+) terminal and the white wire to the (-) terminal.



MEMO

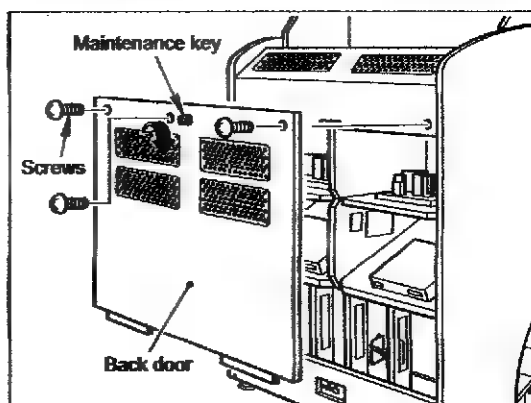
7-4 Replacing and adjusting the potentiometer

How to replace the steering wheel unit potentiometer

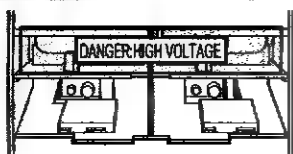


- Before replacing the steering wheel unit potentiometer, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- Since the steering wheel unit is heavy, remove it with care.
- There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.
- If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- When mounting/dismounting the control panel, take care not to damage the wires connecting the steering wheel unit and the main unit.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

- 1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Remove the screws of the back door.
- 3 Insert the attached maintenance key, turn it clockwise and remove the back door.



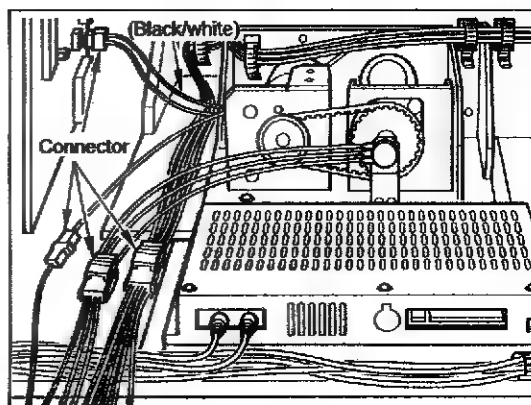
- Never touch any part over the "DANGER: HIGH VOLTAGE" area shown below.



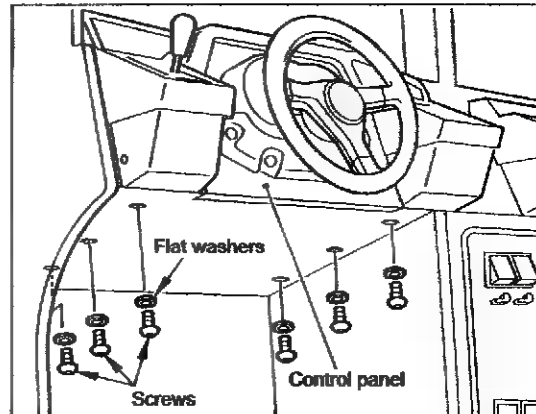
- 4** Disconnect the four connectors shown  right.

- Disconnect the following connectors.
 - SHIFT
 - HANDLE
 - E-HL (HR)
 - Connector of the wires (black/white) without mark

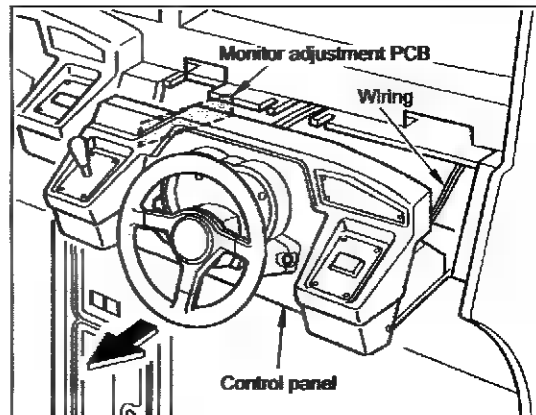
MEMO



- 5** Remove the screws off the control panel.



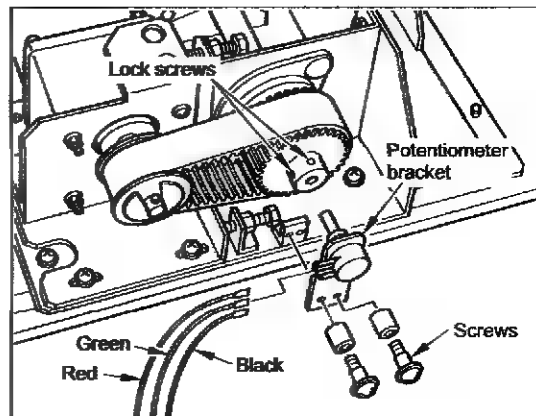
- 6** Pull out the control panel ~~from the~~ you. Take due xare not to drop the control panel. And take care that the control panel does not damage the monitor adjustment PCB.



- 7** Loosen the two fixing screws, remove the screws off the potentiometer breket, and remove the whole bracket.

•If the lock screws are inaccessible, turn the steering wheel to make them accessible and easy to loosen.

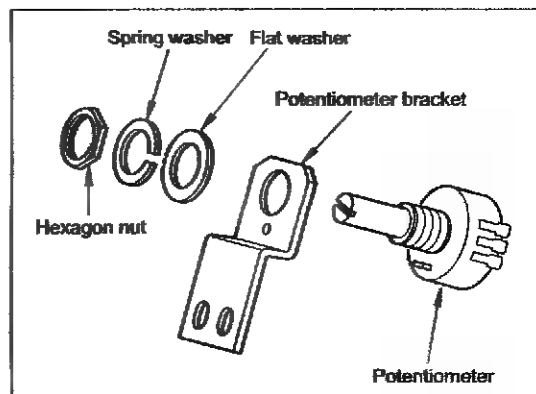
MEMO



- 8** Remove the hexagon nut and separate the potentiometer.

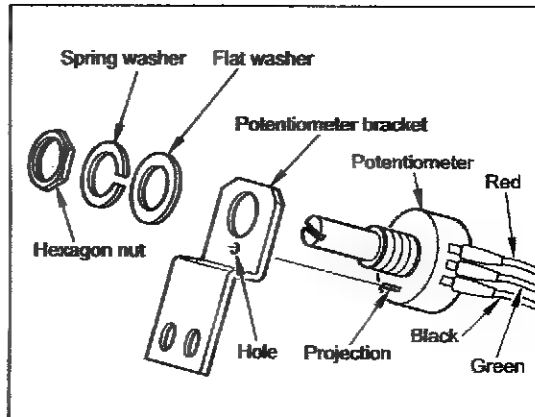
•When replacing the potentiometer with new one, be sure to first make the adjustment on the next page.

MEMO

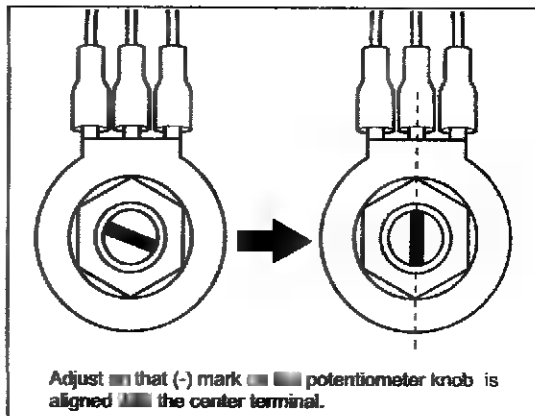


How to adjust the steering wheel unit potentiometer

- 1 Fit the potentiometer projection to the hole of the potentiometer bracket. Tighten up the hexagon nut.
- 2 Connect the wiring properly.



- 3 Grasp the potentiometer tip with your fingers and adjust it as shown in the figure.
- 4 Turn the steering wheel to the original position, install the potentiometer bracket as it was, tighten the bracket with the two fixing screws securely.



•Even when the potentiometer bracket screw and the lock screws are tight enough, the potentiometer bracket is same what loose. Keep in mind that the bracket is not tightly locked.

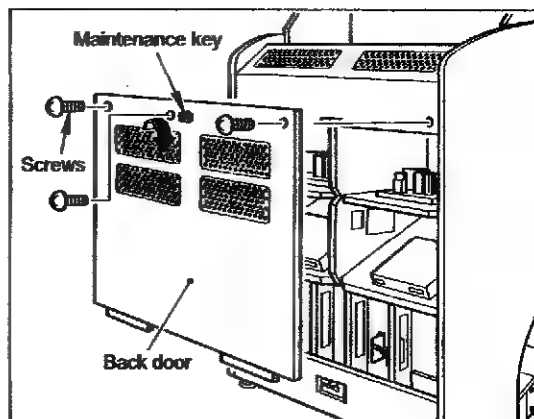
MEMO

- 5 Assemble the steering wheel unit to the main unit in the reverse order.
- 6 Attach the back door in position, and turn the maintenance key counterclockwise.
- 7 Fix the back door tightly with the screws.
(Loose screws may activate the door switch, which keeps of the power.)
- Plug the power cord in the receptacle and turn ON the main power switch.
Carry out "5-2 Checking the game performance" on page 24.
- Call up the "I/O CHECK" screen, show on page 27. Move the steering wheel and make sure the "I" mark comes to the LEFT and RIGHT positions.

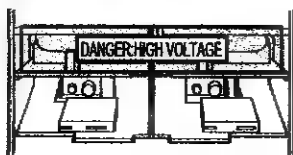
How to replace the pedal unit potentiometers

- Before replacing the acceleration and brake pedal unit potentiometers, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.
- If the sub power switch on the service panel is turned OFF without turning OFF the main power switch of the power unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

- 1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Remove the screws of the back door.
- 3 Insert the attached maintenance key, turn it clockwise and remove the back door.



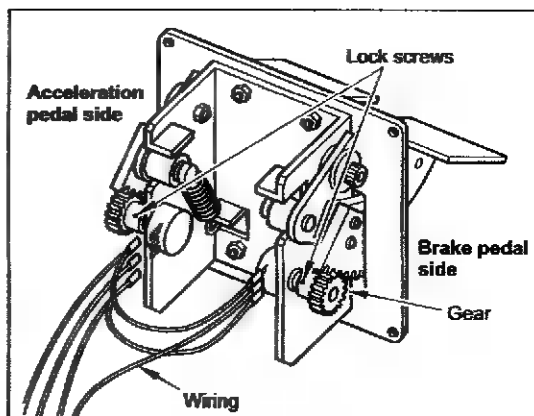
- Never touch any part over the "DANGER: HIGH VOLTAGE" area shown below.



- 4 Disconnect the wiring from the pedal unit potentiometer. Loosen the lock screws and pull out the gears.

- If the lock screws are in a position where it is difficult to loosen them, press the pedal that they are positioned favorably for loosening.

MEMO

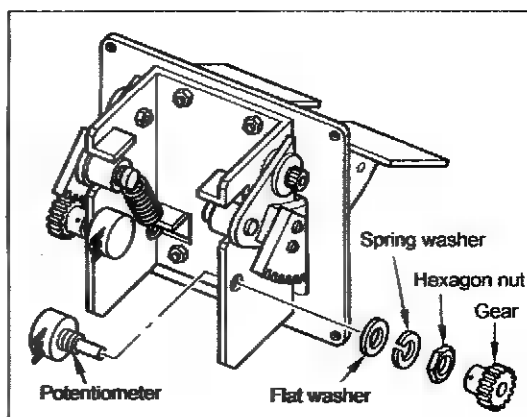


- 5 Remove the hexagon nut and separate the potentiometer.

- 6 Fit new potentiometer first and then the gears.

- Be sure to make the adjustment on the next page before tightening up the gears' lock screws.
- When replacing the potentiometer with new one, be sure to first make the adjustment on the next page.

MEMO

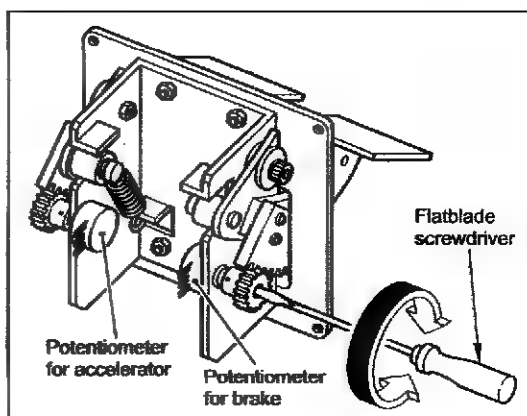


How to adjust the pedal unit (acceleration and brake) potentiometers

- 1 Without touching the pedal, adjust the potentiometer with a flatblade screwdriver.

[Adjusting method]

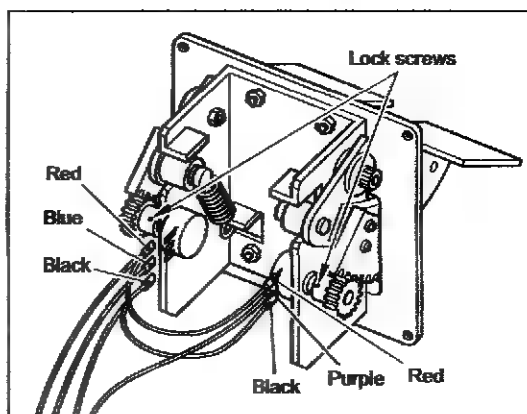
- **Potentiometer for accelerator**
Fully turn the potentiometer counterclockwise and then turn it back by about 10°.
- **Potentiometer for brake**
Fully turn the potentiometer clockwise and then turn it back by about 10°.



- 2 Tighten up the gears' lock screws. Be careful not to confuse the wiring.

- 3 Attach the back door in position, and turn the maintenance key counterclockwise.

- 4 Fix the back door tightly with the screws. (Loose screws may activate the door switch, which keep of the power.)



- 5 Plug the power cord in the receptacle and turn ON the main power switch. Carry out "5-2 Checking the game performance" on page 24.

- 6 Call up the "I/O CHECK" screen, show on page 27. Step on the acceleration pedal and brake pedal and make sure the "I" make the MIN and MAX positions.

7-5 Replacing the shift unit microswitch

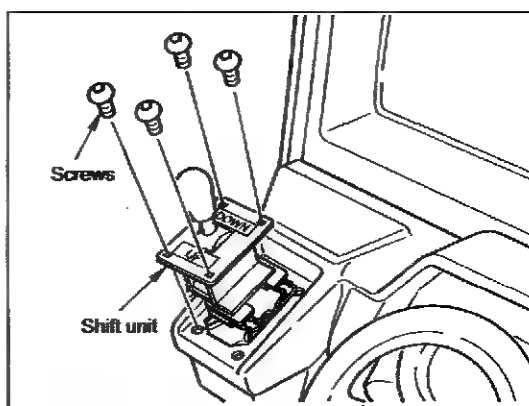
■ How to replace the shift unit microswitch — — — — —



- Before replacing the shift unit microswitch, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

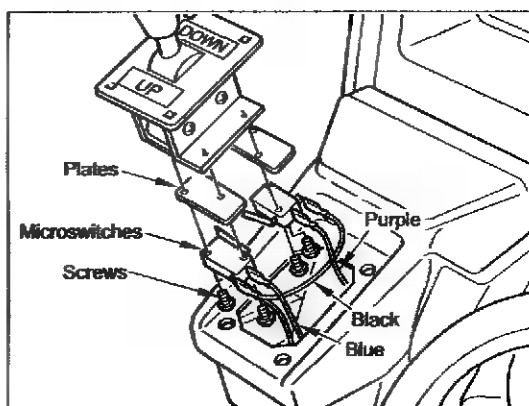
1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.

2 Remove the screws and take out the shift unit.



3 Remove the screws and take out the microswitch and plate.

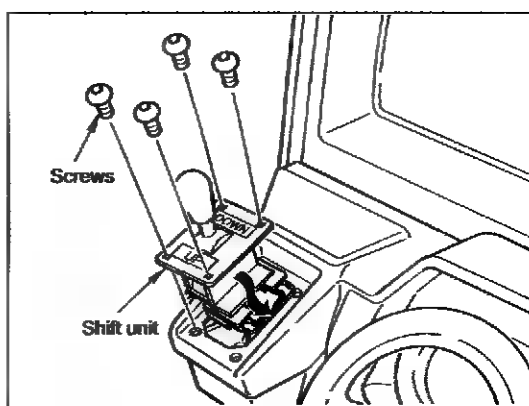
4 When replacing the microswitch with a new one, be careful to position the microswitch correctly. Do not confuse the wiring.



5 Place the shift unit back into position.

- Place the shift unit in the specified position. See the figure on right. "DOWN" to face the monitor "UP" to face the player

MEMO



7-6 Inspecting and replacing the motor brushes

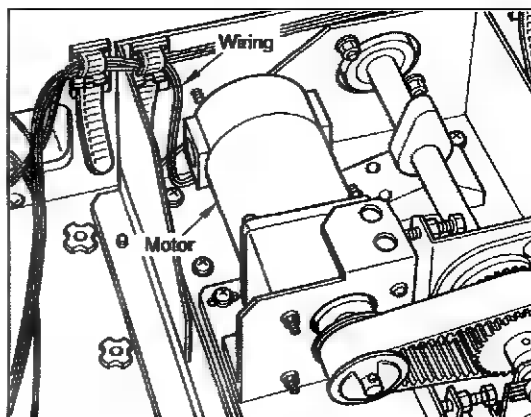
At the motor of the steering wheel unit are fitted two motor brushes. The motor brushes are worn every time when the machine is operated. It is therefore recommended to do periodical checking **Level** every 2000 hours.

■ How to inspect and replace the motor brushes



- Before inspecting and replacing the motor brushes, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

- 1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Referring to page 48, separate the control panel from the main unit.
- 3 Disconnect the wiring from the motor.

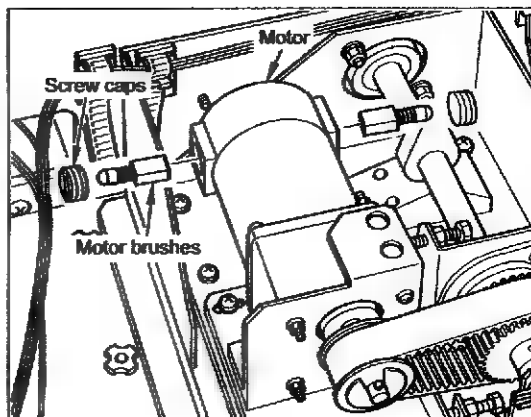


- 4** Using ■ Flatblade screwdriver, remove the ■ caps and take out the motor brushes.

- Check to see if the motor brush has worn out up to the marked line. If so, replace the motor brush with new one.

MEMO

- 5** Install the motor brushes back into position. Attach the control panel in place.

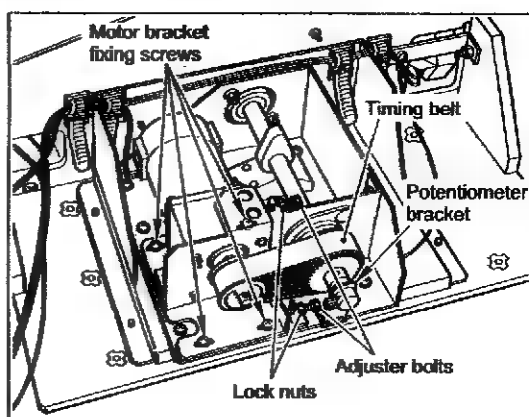


7-7 Replacing the timing belt and adjusting its tension

How to replace the timing belt

- Before replacing the timing belt and adjusting its tension, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

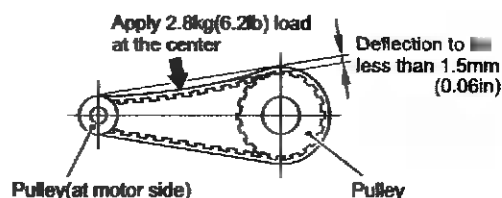
- 1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Referring to page 48, separate the control panel from the main unit.
- 3 Loosen the four motor bracket lock screws and the lock nuts first, and then the two adjuster bolts.
- 4 Referring to page 49, remove the potentiometer bracket and then undo the timing belt.



How to adjust timing belt tension

- 1 Keeping loose the motor bracket fixing screws and the adjuster bolts, apply a new timing belt on the pulley.
- 2 Make sure the timing belt runs in mesh with the pulley. Tighten the adjuster bolts to achieve the deflection specified in the figure.
- 3 Make sure the deflection is specified. Tighten up the lock nuts for the adjuster bolts.

Appropriate timing belt sag

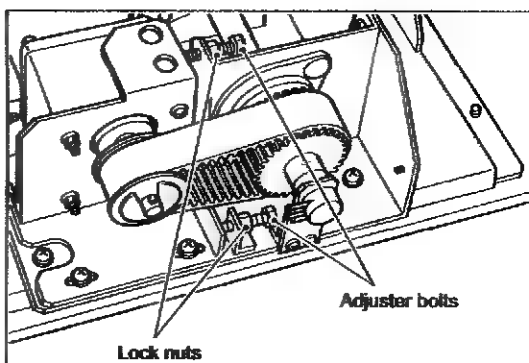


Preferably use a tensioner on the market for easier adjustment. For frequency measurement, set to 305 Hz.

• If the timing belt has a wrong deflection, it may break or wear out much earlier than expected.

MEMO

- 4 Tighten the motor bracket lock screws evenly. Finally install the potentiometer bracket back in position.



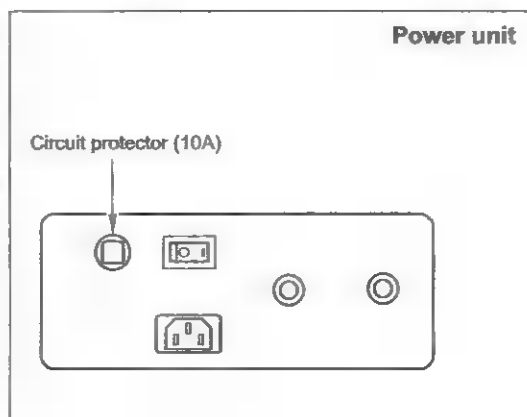
7-8 Resetting the circuit protector

If an overcurrent or short circuit occurs, the circuit protector will be automatically actuated to protect the electric circuits of the game machine. When resetting the circuit protector, turn OFF the main power switch, unplug the power cord from the receptacle, eliminate the cause, and then press the button of the circuit protector.

■ How to reset the circuit protector —————

- Before resetting the circuit protector, be sure to **turn OFF the main power switch** and **unplug the power cord from the receptacle**.
- If the circuit protector trips soon again, immediately turn OFF the main power switch, unplug the power cord, and contact your nearest dealer.
- There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and nearby parts.
- If the sub power switch of the service panel is turned OFF without turning OFF the main power of the power unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- If the machine is in abnormal conditions and does not operate normally, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

- 1 Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Remove the cause of the trouble. Press the button on the circuit protector of the power unit.



7-9 Adjusting the monitor

The monitor has already been adjusted at the time of shipment, but it may be readjusted as desired.

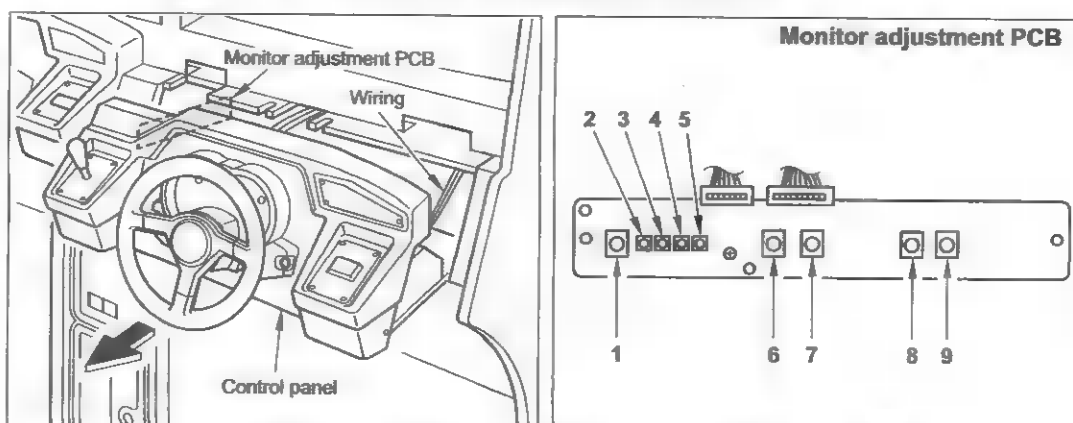
When adjusting the monitor, refer to "SCREEN CHECK" and "COLOR CHECK" on page 28.



•There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.

Monitor adjustment PCB

The monitor adjustment PCB is located inside the game machine. When adjusting the monitor, pull the control panel. (See page 48 and 49)



1	CONTRAST	Contrast adjustment Used to change contrast.
2	R.GAIN	Red input gain adjustment Changes red brightness. Turning it clockwise will make the red deeper.
3	G.GAIN	Green input gain adjustment Changes green brightness. Turning it clockwise will make the green deeper.
4	B.GAIN	Blue input gain adjustment Changes blue brightness. Turning it clockwise will make the blue deeper.
5	BRIGHT	Brightness adjustment Changes brightness. Turning it clockwise will make the image brighter.
6	H.SIZE	Horizontal screen size adjustment Changes the width of the screen.
7	H.POSI	Horizontal image position adjustment Changes the image position in the horizontal direction.
8	V.SIZE	Vertical screen size adjustment Changes the height of the screen.
9	V.POSI	Vertical image position adjustment Changes the image position in the vertical direction.

7-10 Troubleshooting

If the power switch is turned ON but the machine fails to start properly, take the following measures. If the machine still malfunctions or any other problem than described below occurs, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

Trouble	Possible causes and check points	Measures
No image on screen, title unit fluorescent light failure to light up.	<ul style="list-style-type: none"> •No power turned ON. (Main power switch, Sub-power switch.) •Power cord disconnected from the machine or wall outlet. •Back door open or loosely closed. •Circuit protector activated. 	<ul style="list-style-type: none"> •Turn ON the power switch. Check also the shop's circuit breaker. (See page 42.) •Reconnect the power cord tightly. (See page 42.) •Screw down the back door tightly. (The door switch has been activated to cut off the power.) (See page 42.) •Take measures, referring back to page 56.
No image ■ screen : title unit fluorescent light on.	<ul style="list-style-type: none"> •Memory card not inserted. •PCB unit defective. •Monitor defective. 	<ul style="list-style-type: none"> •Check the memory card for wrong position. (See page 41.) •Immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.
Title unit fluorescent lamp failure to light up.	<ul style="list-style-type: none"> •Fluorescent lamp or glow lamp broken. 	<ul style="list-style-type: none"> •Replace the fluorescent lamp or glow lamp with ■ one of the ■ type. (See page 46.)
Screen too dark or too bright.	<ul style="list-style-type: none"> •Monitor maladjusted. 	<ul style="list-style-type: none"> •Readjust the brightness on the monitor adjustment PCB. (See page 57.)
Start button malfunctioning.	<ul style="list-style-type: none"> •Switch wires disconnected from start button. •Start button defective. 	<ul style="list-style-type: none"> •Reconnect the switch wires to the socket. (See page 47.) •Replace the start button with ■ one. (See page 47.)

Trouble	Possible causes and check points	Measures
Start button functioning, but failure to light up.	<ul style="list-style-type: none"> •Lamp wires disconnected from start button socket, or reversely connected. •Start button lamp (LED) defective. 	<ul style="list-style-type: none"> •Reconnect the switch wires to the socket. (See page 47.) •Check the performance on the "I/O CHECK" screens. Replace the start button if required. (See page 27 and 47.)
Coin selector malfunctioning.	<ul style="list-style-type: none"> •Coin selector defective. 	<ul style="list-style-type: none"> •Check the performance on the "I/O CHECK" screen. If malfunctioning, replace the coin selector or microswitch with new one. (See page 27 and 45.)
No sound or too loud (or too soft) sound.	<ul style="list-style-type: none"> •Sound level maladjusted. 	<ul style="list-style-type: none"> •Make proper setting on the "SOUND OPTIONS" screen. (See page 29.)
Pedal unit malfunctioning.	<ul style="list-style-type: none"> •Wires disconnected from potentiometer. •Potentiometer maladjusted. •Potentiometer defective. 	<ul style="list-style-type: none"> •Reconnect the wires to the potentiometer. (See page 48.) •Check the performance on the "I/O CHECK" screens and readjust the potentiometer. (See page 27 and 48.) •Check the performance on the "I/O CHECK" screens. Replace the potentiometer if required. (See page 27 and 48.)
"BAD" displayed on the "DISK MEDIA CHECK" screen in test mode.	<ul style="list-style-type: none"> •Memory card defective. 	<ul style="list-style-type: none"> •Immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.
"HARDWARE ERROR (***)" displayed on screen: game failure to start.	<ul style="list-style-type: none"> •Something wrong with the hardware. 	<ul style="list-style-type: none"> •Write down the error code displayed. Immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

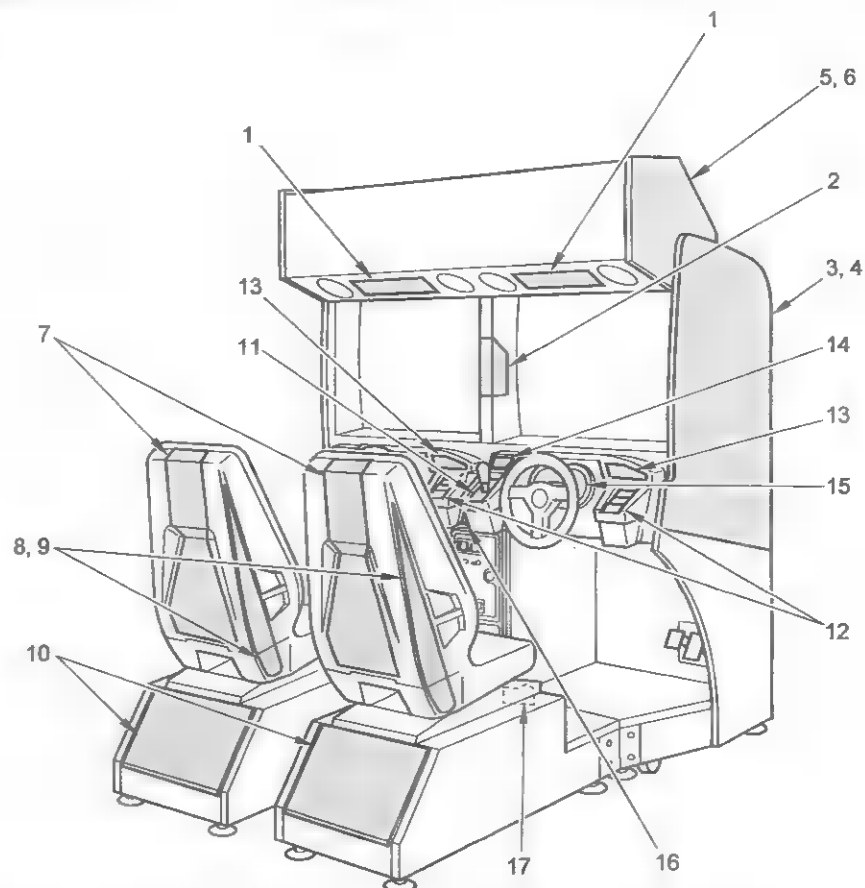
7 Maintenance

Trouble	Possible causes and check points	Measures
"OK" appears at the initial device check, but this check is repeated without going to the game mode.	<ul style="list-style-type: none"> •Some connectors disconnected or wires broken. 	<ul style="list-style-type: none"> •Turn OFF the main power switch, unplug the power cord from the receptacle and check all the connectors for poor contact. If all the connectors are tightly connected but the trouble occurs, contact your nearest dealer.
"NETWORK ERROR" displayed: failure ■ play networked.	<ul style="list-style-type: none"> •"NETWORK ID" wrongly set. •Networking cable defective. •One of the networking cable has been disconnected from during play. •One of the networking cable has been internally broken or broken. 	<ul style="list-style-type: none"> •Make correct network ID on the "NETWORK OPTIONS" screen in the test mode. (See page 32.) •Reconnect the networking cable between the machines (see page 23) or replace the networking cable. •1. Turn OFF the main power switch. 2. Connect the networking cable properly. 3. Turn ON the main power switch again. •Replace the networking cable with new one. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>•You can also use commercially-sold video cable (75Ω3C-FV) having a length of 2m (78.74 in) or less.</p> </div> <p style="text-align: center;">MEMO</p>
"DNC" and "I" marks appearing alternately at STATUS on "NETWORK OPTIONS" screen, or "ERROR" happening more often.	<ul style="list-style-type: none"> •Supply voltage drop or unstable. 	<ul style="list-style-type: none"> •Connect the networked machine's power plug to the wall outlet.

8 Annex

8-1 Label locations and exploded view

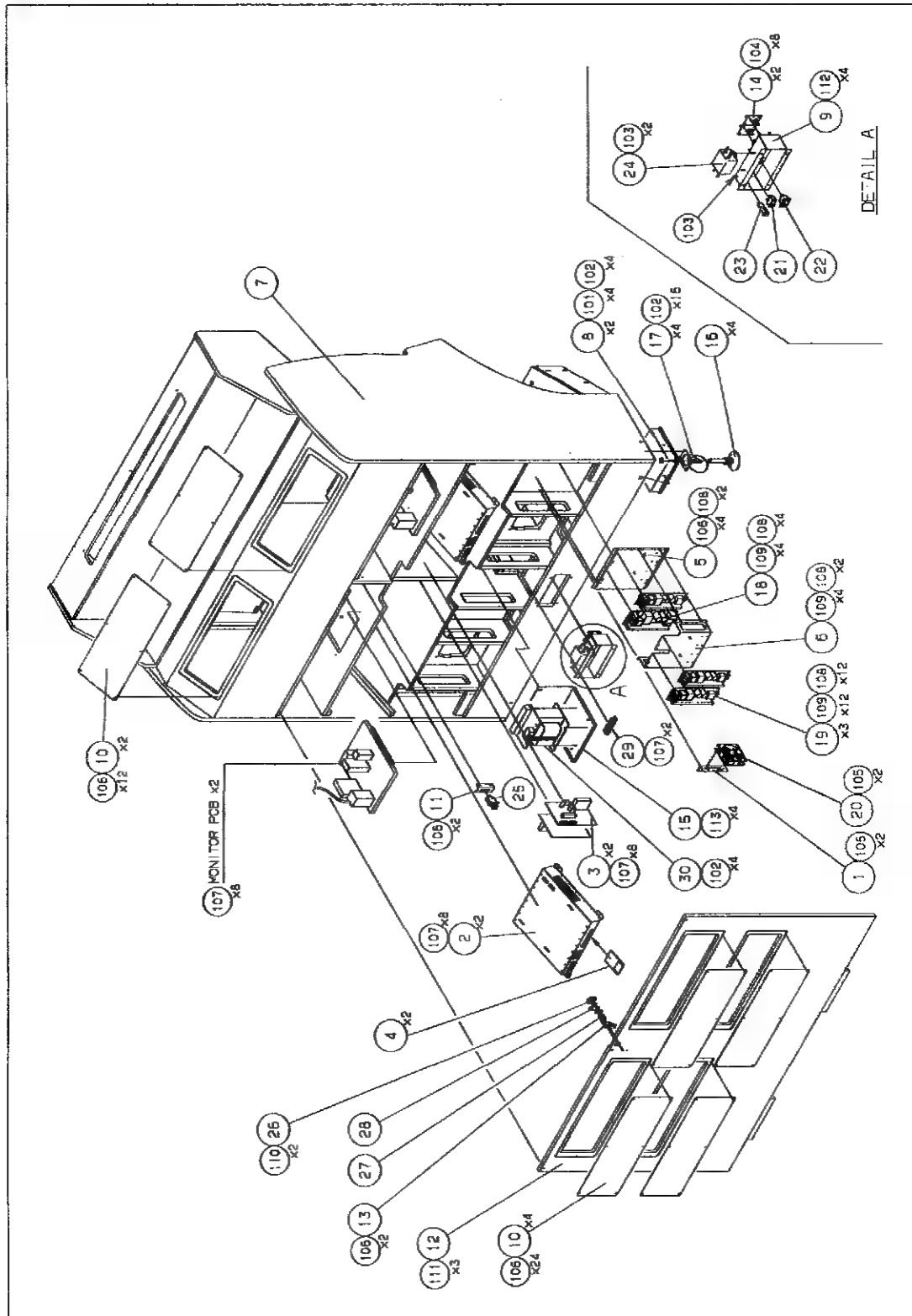
■ Label —————



No.	CODE No.	NAME	QTY	NOTE
1	0000096944	LABEL, PLAYING A/HD	2	
2	0000096945	LABEL, PLAYING B/HD	1	
3	0000096518	LABEL, SIDE L	1	
4	0000096521	LABEL, SIDE R	1	
5	0000096530	LABEL, KONAMI L	1	
6	0000096531	LABEL, KONAMI R	1	
7	0000096532	LABEL, SEAT A	2	
■	0000096536	LABEL, SEAT B/L	2	
■	0000096537	LABEL, SEAT B/R	2	
10	0000096538	LABEL, SEAT C	2	
11	0000096522	LABEL, COMPANE A	2	
12	0000096523	LABEL, COMPANE B	2	
13	0000096528	LABEL, COMPANE C	2	
14	0000096529	LABEL, COMPANE D	2	
■	0000081263	LABEL, METER	2	
■	0000037716	LABEL, ENTRY	1	
17	0000037424	LABEL, SEAT	2	
18	0000096546	LABEL, ZEICHEN	1	Player's No. (1P to 4P)

GMA41-TB / HD

■ FIG.1 UNIT, CABINET(1/2)



GMA41-TB / HD

NO.	CODE NO.	NAME	MATERIAL/SPEC.	QTY	NOTE
101		SCREW, CROSS TRUSS	M6x25	1	
102		SCREW, CROSS PAN SENS	M6x20	24	SV, PV
103		NUT, FLANGE	M4	3	
104		SCREW, PAN SENS	M3x10	6	SV, PV
105		SCREW, CROSS PAN SENS	M4x30	2	SV, PV
106		SCREW, CROSS TIPPING TRUSS	d4x10	45	
107		SCREW, WOOD CROSS	d3.1x13	25	
108		SPACER	BSB-308-5	20	
109		SCREW, CROSS PAN SENS	M3x6	20	SV, PV
110		SCREW, CROSS TIPPING PAN	d3x8	2	
111		SCREW, CROSS TRUSS	M6x30	3	
112		SCREW, CROSS TRUSS	M4x30	4	
113		SCREW, CROSS PAN SENS	M6x20	4	SV

NO.	CODE NO.	NAME	MATERIAL/SPEC.	QTY	NOTE
1	0000013534	BKT, FAN	SECC T1.6	1	
2	0000096448	UNIT, PCB BOX		2	
3	0000056403	UNIT, PCB(K)		2	
4	0000096446	UNIT, CF-CARD		2	
5	0000037024	BRACKET, REGULATOR	SPCC T1.2	1	
6	0000043023	BRACKET, REGULATOR	SPCC T1.2	1	
7	0000045953	CABINET	WOOD T15	1	
8	0000008802	BKT., CASTER(D)	SPCC T3.2	1	
9	0000041183	BRACKET, POWER	SPCC T1.2	1	
10	0000009465	BRACKET, AIR	PUNCH D3 PITCH4	6	
11	0000012230	BKT., SWITCH	SECC T1.6	1	
12	0000013264	COVER, CABINET	WOOD T15	1	
13	0000012231	BKT., SWITCH	SECC T2.3	1	
14	0000037320	ASS'Y, PCB	LANC CONNECTOR	2	
15	0000043513	BASE, TRANSFORMER	SPCC T1.6	1	
16	0000002405	ADJUSTER	C-275-A-3	4	
17	0000002051	CASTER	K-420G-75-N	4	
18	0000003799	REG., SWITCHING	ZMS150PF-5/J	1	
19	0000030688	REG., SWITCHING	ZMS100PF-12/J	3	
20	0000003209	MOTOR, FAN	FBA09A12M	1	
21	0000039100	SWITCH, ROCKER	AJ8201BK	1	
22	0000031056	INLET, AC	M1816	1	
23	0000035921	PROTECTOR CIRCUIT	NRF110-10A	1	
24	0000003180	FILTER, NOISE	MAS-1210-33	1	
25	0000004953	SWITCH, DOOR	AV1225	1	
26	0000005684	WASHER, LOCK	KSP-1	1	
27	0000002771	LOCK	NS-801-1 W/O	1	
28	0000004531	PLATE, LOCK	NO.1	1	
29	0000035925	BLOCK, TERMINAL	ML-6750F-1678C-8P	1	
30	0000077822	TRANSFORMER	500VA	1	

FIG.2 UNIT, CABINET(2/2)

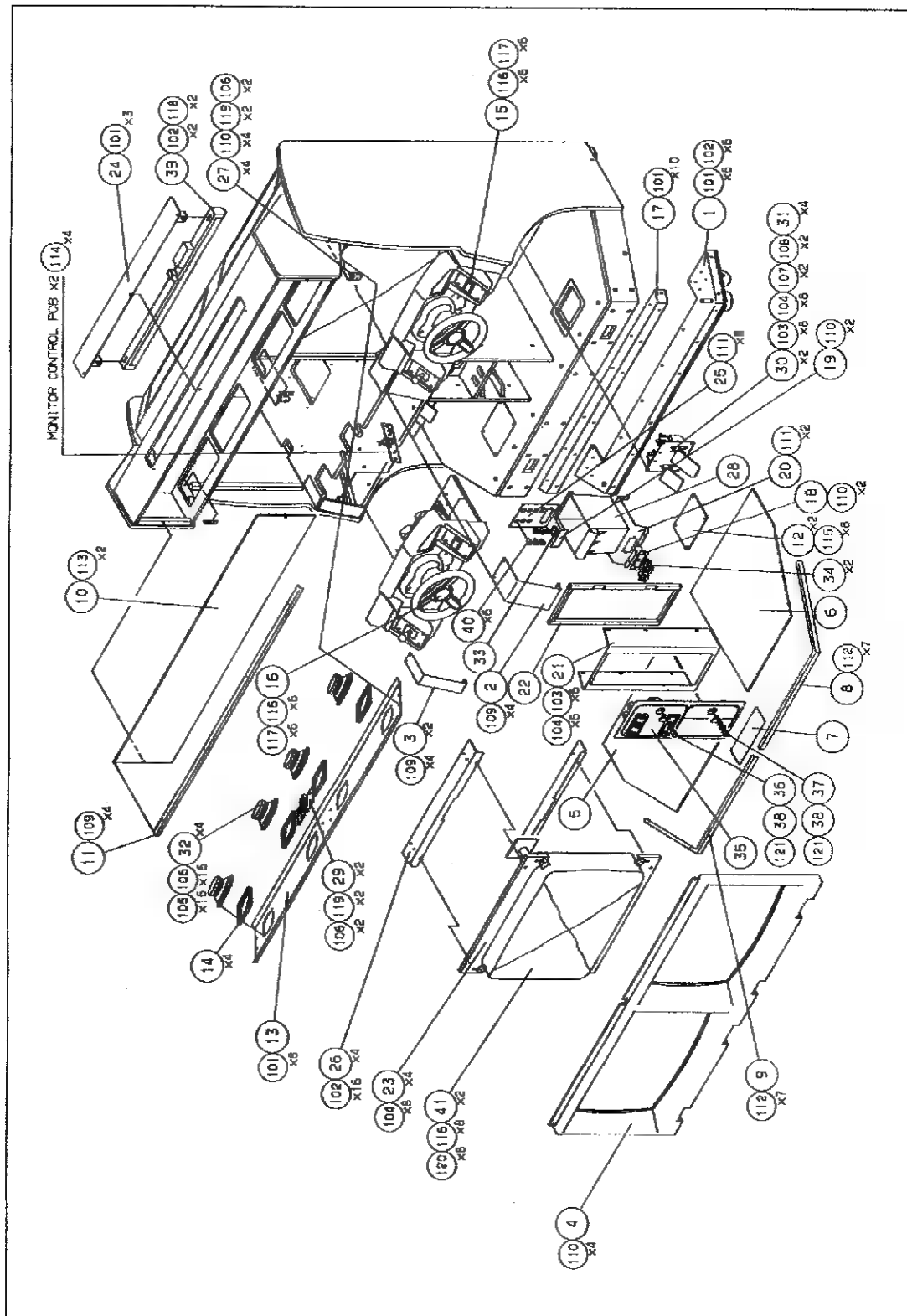
GMA41-TB

NO.	CODE NO.	NAME	MATERIAL/SPEC.	QTY	NOTE
1	0000008799	BKT, CASTER(A)	SPCC T3.2	1	
2	0000008800	COVER, CENTER	SUS T1	1	
3	0000008804	COVER, SIDE	SUS 304 T1	1	
4	0000007625	ESCUSION(A)	PMMA/PVC T5	1	
5	0000012581	SHEET, FLOOR(L)	PVC	1	
6	0000012582	SHEET, FLOOR(R)	PVC	1	
7	0000011689	SHEET, FLOOR(B)	PVC	1	
8	0000008808	COVER, EDGE(A)	SUS 304 T1	1	
9	0000008809	COVER, EDGE(B)	SUS 304 T1	1	
10	0000096843	PANEL, TITLE	PMMA T6	1	
11	0000008806	COVER, TOP	SPCC T1.2	1	
12	0000013530	COVER, FOOT	SPCC T2.3	2	
13	0000087161	HOLDER, TITLE(A)	SPCC T1.6	1	
14	0000011689	PLATE, SPEAKER HOLD	WOOD T9	4	
15	0000096613	UNIT, CONTROL(R)		1	
16	0000011689	UNIT, CONTROL(L)		1	
17	0000008800	BKT., SUPPORT	SPCC T3.2	1	
18	0000012186	PLATE, COUNTER	SPCC T1.2	1	
19	0000012255	PLATE, COVER	SPCC T1.2	1	
20	0000041198	BRACKET, COUNTER	SPCC T1.6	1	
21	0000007411	BKT., COIN SELECTOR	SPCC T1.6	1	
22	0000008402	BOARD, SELECTOR	WOOD T15	1	
23	0000081190	BRACKET, MONITOR	SECC T2.3	1	
24	0000008800	BKT, LAMP	SPCC T1.6	1	
25	0000013531	BKT., SERVICE	SPCC T1.2	1	
26	0000008805	FRAME, MONITOR	SECC T2.3	1	
27	0000013559	FIXTURE, CONNECT	SPCC T1.2	4	
28	0000006850	BOX, COIN	ABS	1	
29	0000013536	FIXTURE, SUPPORT	SPCC T2.3	2	
30	0000002247	GAME PEDAL	2V, R. (AC/BR)	1	

NO.	CODE NO.	NAME	MATERIAL/SPEC.	QTY	NOTE
31	0000001723	POTENTIOMETER	EVS-U0AS25E53	4	
32	0000002322	SPEAKER	PD10391A	4	
33	00000039100	SWITCH, ROCKER	AJ8201BK	1	
34	00000030431	COUNTER	GX-06PD55	2	
35	00000085349	DOOR, COIN	NAD-V2-KBTA	1	
36	00000001575	LOCK	NS-801-1 W/2	1	
37	00000005537	LOCK	NS-812 W/2	1	
38	00000004799	PLATE, LOCK	NO. 2	2	
39	00000002622	LAMP, F. WITH	S-32V875MM	1	
40	00000005098	SWITCH, PUSH	DS-412-2P	6	
41	0000081148	MONITOR	K29CC55	2	
101		SCREW, CROSS TRUSS	M5x25	27	
102		SCREW, CROSS PIN SENS	M6x20	24	SV, PV
103		BOLT, CAP HEX	M5x25	14	
104		NUT, FL	M5	22	
105		BOLT, CAP SQUARE HEX	M4x25	15	
106		NUT, FLANGE	M4	20	
107		SCREW, CROSS SENS	M3x10	2	SV, PV
108		NUT, FLANGE	M3	2	
109		SCREW, CROSS TAPPING TRUSS	d4x10	12	
110		SCREW, CROSS PIN SENS	M4x15	12	SV, PV
111		SCREW, CROSS TAPPING TRUSS	d4x10	6	
112		NAIL	18x16	14	
113		SCREW, CROSS	M6x25	2	
114		SCREW, WOOD	d3, 1x13	4	
115		SCREW, WOOD FLAT	d3, 1x13	8	
116		WASHER, PLAIN	d6	20	
117		BOLT, BUTTON HEAD	M6x30	12	
118		WASHER, PLAIN	d8	2	
119		SCREW, CROSS TRUSS	M4x30	4	
120		BOLT, HEX CAP	M6x25	8	VA(SW)
121		WASHER, PLAIN	d8	2	

GMA41-HD

FIG.2 UNIT, CABINET(2/2)



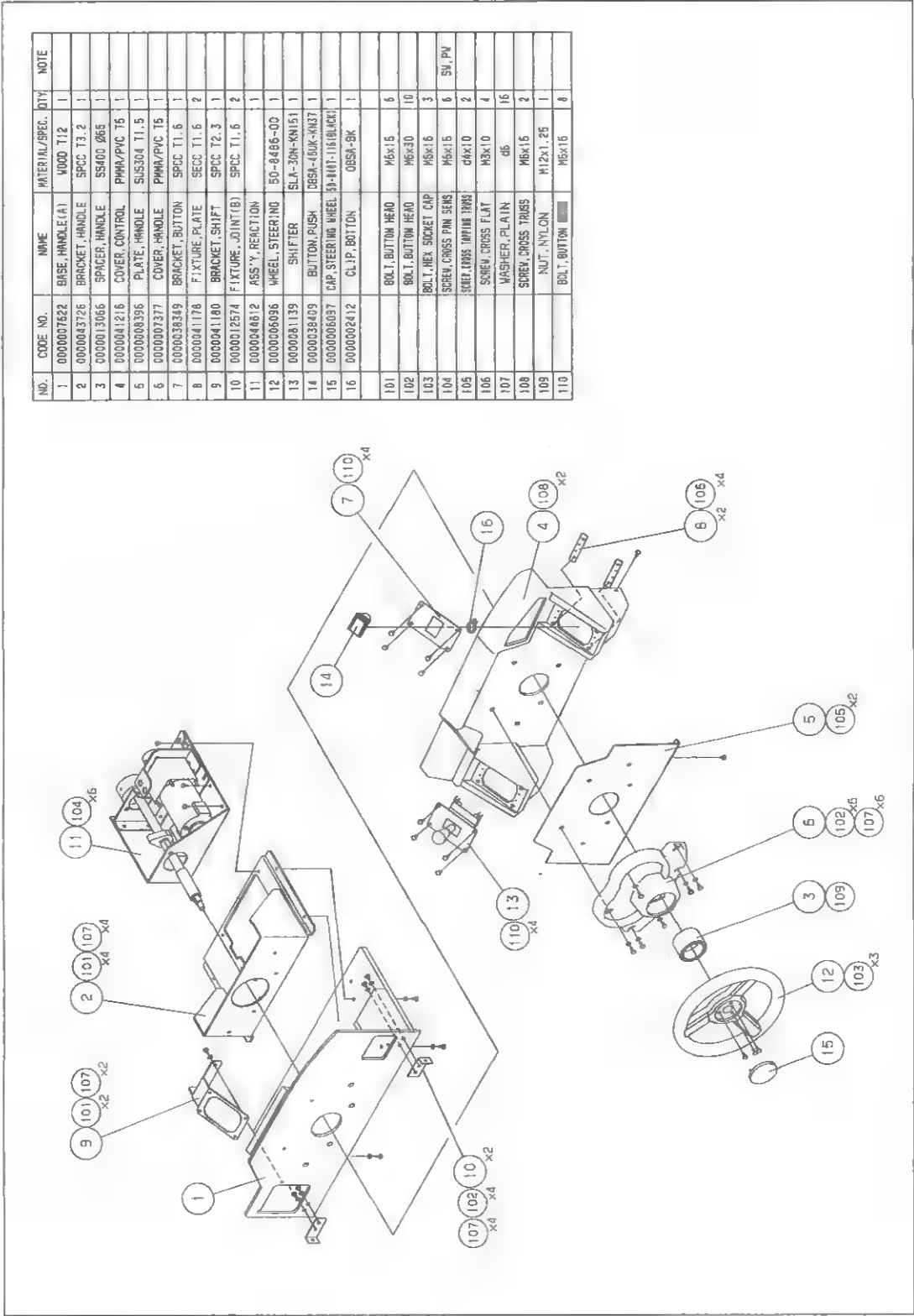
GMA41-HD

NO.	CODE NO.	NAME	MATERIAL/SPEC.	QTY	NOTE
1	0000008799	BKT, CASTER(A)	SPCC T3.2	1	
2	0000008803	COVER, CENTER	SUS 304 T1	1	
3	0000008804	COVER, SIDE	SUS 304 T1	2	
4	0000007625	ESCUSION(A)	PMMA/PVC T5	1	
5	0000012581	SHEET, FLOOR(L)	PVC	1	
6	0000012582	SHEET, FLOOR(R)	PVC	1	
7	0000011589	SHEET, FLOOR(B)	PVC	1	
8	0000008808	COVER, EDGE(A)	SUS 304 T1	1	
9	0000008809	COVER, EDGE(B)	SUS 304 T1	1	
10	0000095843	PANEL, TITLE	PMMA T5	1	
11	0000008806	COVER, TOP	SPCC T1.2	1	
12	0000013530	COVER, FOOT	SPCC T2.3	2	
13	0000087161	HOLDER, TITLE(A)	SPCC T1.6	1	
14	0000013558	PLATE, SPEAKER HOLD	WOOD T9	4	
15	0000096613	UNIT, CONTROL (R)		1	
16	0000096605	UNIT, CONTROL (L)		1	
17	0000008800	BKT., SUPPORT	SPCC T3.2	1	
18	0000012186	PLATE, COUNTER	SPCC T1.2	1	
19	0000012255	PLATE, COVER	SPCC T1.2	1	
20	0000041198	BRACKET, COUNTER	SPCC T1.6	1	
21	0000007411	BKT. COIN SELECTOR	SPCC T1.6	1	
22	0000008402	BOARD, SELECTOR	WOOD T15	1	
23	0000081190	BRACKET, MONITOR	SECC T2.3	4	
24	0000008807	BKT., LAMP	SPCC T1.6	1	
25	0000013531	BKT., SERVICE	SPCC T1.2	1	
26	0000008805	FRAME, MONITOR	SECC T2.3	4	
27	0000013559	FIXTURE, CONNECT	SPCC T1.2	4	
28	0000006850	BOX, COIN	ABS	1	
29	0000013535	FIXTURE, SUPPORT	SPCC T2.3	2	
30	0000002247	GAME PEDAL	2V.R. (AC/BR)	2	

NO.	CODE NO.	NAME	MATERIAL/SPEC.	QTY	NOTE
31	0000001723	POTENTIOMETER	EVS-J0A525E53	4	
32	0000002322	SPEAKER	PD10391A	4	
33	0000039100	SWITCH, ROCKER	AJ8201BK	1	
34	0000030431	COUNTER	GK-06PD55	2	
35	0000086347	DOOR, COIN	NAD-V2-KBHA	1	
36	0000001676	LOCK	NS-801-1 W/2	1	
37	0000005537	LOCK	NS-812 W/2	1	
38	0000004799	PLATE, LOCK	NO. 2	2	
39	0000002522	LAMP, F. WITH HOLDER	S-32W875MM	1	
40	0000005098	SWITCH, PUSH	DS-412-2P	6	
41	0000081148	MONITOR	K29CC55	2	
101		SCREW, CROSS TRUSS	M6x25	27	
102		SCREW, CROSS PIN SENS	M6x20	24	SW, PV
103		BOLT, CAP SQUARE NECK	M6x25	14	
104		NUT, FLANGE	M6	22	
105		BOLT, CAP SQUARE NECK	M4x25	16	
106		NUT, FLANGE	M4	20	
107		SCREW, CROSS PIN SENS	M3x10	11	SW, PV
108		NUT, FLANGE	M3	2	
109		SCREW, CROSS TAPPING TRUSS	d4x10	12	
110		SCREW, CROSS ■ SENS	M4x15	12	SW, PV
111		SCREW, CROSS TAPPING TRUSS	d4x10	6	
112		NAIL	φ18x16	14	
113		SCREW, CROSS TRUSS	M6x25	11	
114		SCREW, WOOD CROSS ROUND	d3.1x13	4	
115		SCREW, WOOD CROSS FLAT	d3.1x13	11	
116		WASHER, PLAIN	d6	20	
117		BOLT, BUTTON HEAD	M6x30	12	
118		WASHER, PLAIN	d6	2	
119		SCREW, CROSS TRUSS	M4x30	11	
120		BOLT, HEX SOCKET CAP	M6x25	8	VA (SW)
121		WASHER, PLAIN	d6	2	

GMA41-TB / HD

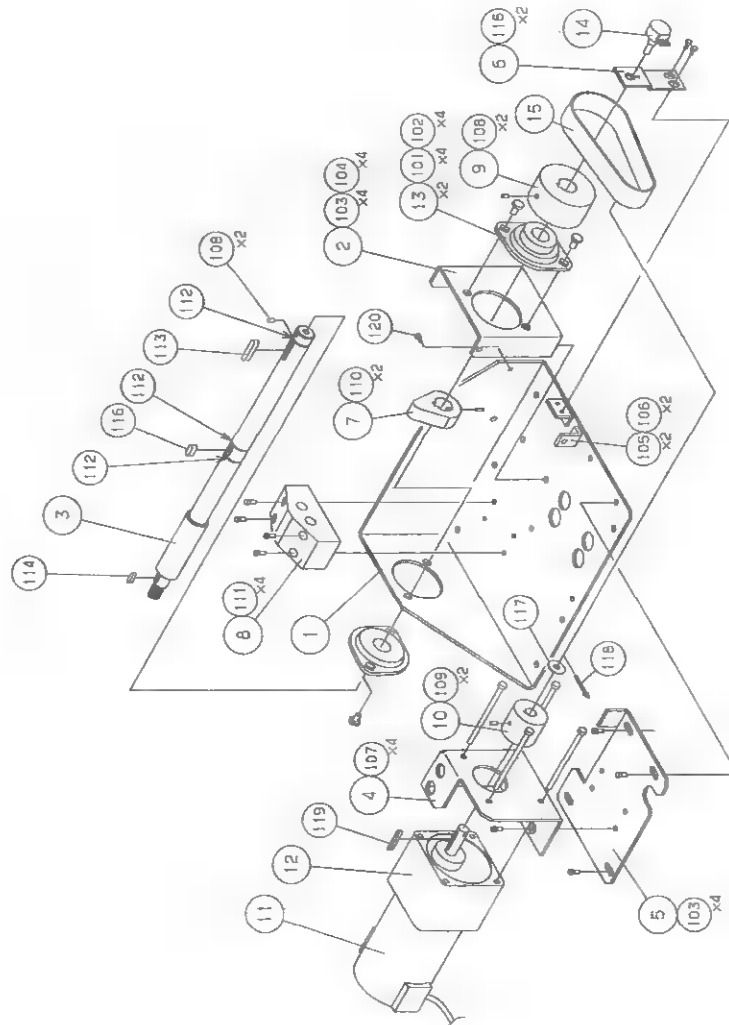
FIG.3 UNIT, CONTROL



GMA41-TB / HD

FIG.4 ASS'Y, REACTION

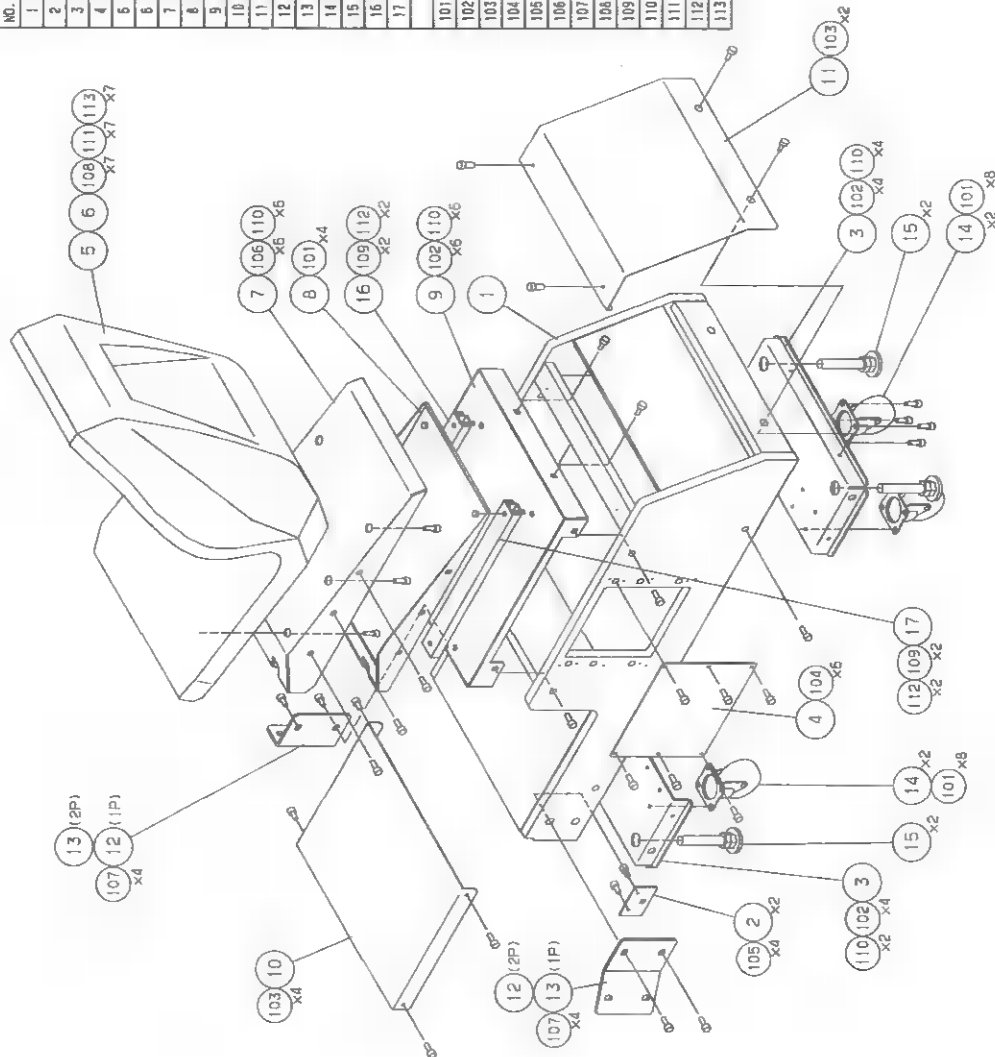
NO.	CODE NO.	NAME	MATERIAL/SPEC.	QTY	NOTE
1	0000041191	BASE, MOTOR	SPCC T3.2	1	
2	0000009164	BKT, UNIT(B)	SPCC T3.2	1	
3	0000041192	SHAFT	S45C	1	
4	0000009162	SUPPORT, PLATE(A)	SPCC T3.2	1	
5	0000041194	BRACKET, MOTOR	SPCC T3.2	1	
6	0000041196	BRACKET, P. METER	SPCC T2.3	1	
7	0000012741	STOPPER, SHAFT	SS400	1	
8	0000044106	STOPPER	UR H590	1	
9	0000041239	PULLEY	P405H0250A	1	
10	0000041240	PULLEY	P245H0250A	1	
11	0000036918	MOTOR, DC	GEELH-C-47-2	1	
12	0000036919	GEARHEAD	BRL-063163	1	
13	0000001721	BEARING	ASPL 204	2	
14	0000001723	POTENTIOMETER	EWS-10A925E63	1	
15	0000041389	BELT, TIMING	B2605H0350	1	
101		BOLT, CAP SCREW, MECH	M6x15	4	
102		NUT, FLANGE	H6	4	
103		SCREW, CROSS PAN SEMS	M6x15	6	SW, PV
104		NUT, FLANGE	H6	4	
105		BOLT, HEX	M6x30	2	
106		NUT, HEX	H6	2	
107		SCREW, CROSS FLAT	M6x14	4	
108		SCREW, HEX SOCKET SET	M4x12	4	
109		SCREW, HEX SOCKET SET	M4x6	2	
110		SCREW, HEX SOCKET SET	M6x8	2	
111		SCREW, CROSS PAN	M6x30	4	
112		RING, RETAINING & SHAFT	Q20	3	
113		KEY, PARALLEL	6x6x28	1	
114		KEY, PARALLEL	4x4x13	1	
115		SHOULDER	M4x10	2	
116		KEY, PARALLEL	6x6x14	1	
117		WASHER, PLAIN	Q12	1	
118		PIN, SPLIT	Q3, 2x18	1	
119		KEY, PARALLEL	4x4x32	1	
120		SCREW, CROSS	M4x10	1	SW, PV



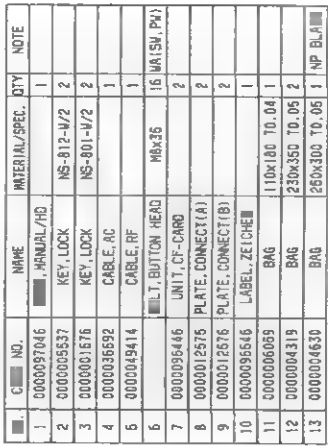
GMA41-TB / HD

FIG.5 UNIT, CABINET SEAT

NO.	CODE NO.	NAME	MATERIAL/SPEC.	QTY	NOTE
1	000001192	CABINET, SEAT	WOOD T15	1	
2	0000012577	PLATE, CONNECT	SPOC T2.3	2	
3	000001191	BRACKET, ADJUSTER	SPOC T3.2	2	
4	000001183	COVER, MAINTENANCE	SECC T1.6	1	
5	0000037086	SEAT	PP	1	
6	0000037087	COVER, SEAT	PMA/PVC T4	1	
7	0000081186	BRACKET, SEAT	MECC T2.3	1	
8	0000081186	BASE, SEAT	SECC T2.3	1	
9	0000081187	BASE, SEAT	SECC T2.3	1	
10	0000081182	PLATE, STEP	SUS304 T1	1	
11	0000081184	COVER, SEAT	SUS304 T1	1	
12	0000012576	PLATE, CONNECT(B)	SS400 T4.5	1	
13	0000012575	PLATE, CONNECT(A)	SS400 T4.5	1	
14	0000020261	CASTER	K-4200-76-N	4	
15	0000061705	ADJUSTER	16*32*75	4	
16	0000006131	RAIL, SEAT(L)	Q0260 SEAT(L)	1	
17	0000006132	RAIL, SEAT(R)	Q0260 SEAT(R)	1	
101		SCREW	SEMS M6x20	20	SV, PV
102		SCREW, CROSS TRUSS	M6x30	14	
103		SCREW, CROSS TRIPPING TRUSS	d3.5x12	6	
104		SCREW, CROSS TRIPPING TRUSS	d3.5x12	6	
105		SCREW, WOOD CROSS ROUND	d3.1x13	4	
106		BOLT, BUTTON HEAD	M6x20	6	VA(SV)
107		BOLT, BUTTON HEAD	M6x35	6	VA(SV, PV)
108		BOLT, HEX INCKET CAP	M6x18	7	
109		NUT, NYLON	M6	4	
110		WASHER, PLAIN	d5	18	
111		WASHER, PLAIN	d8	7	
112		WASHER, PLAIN	d5	4	
113		WASHER, SPRING	d8	7	

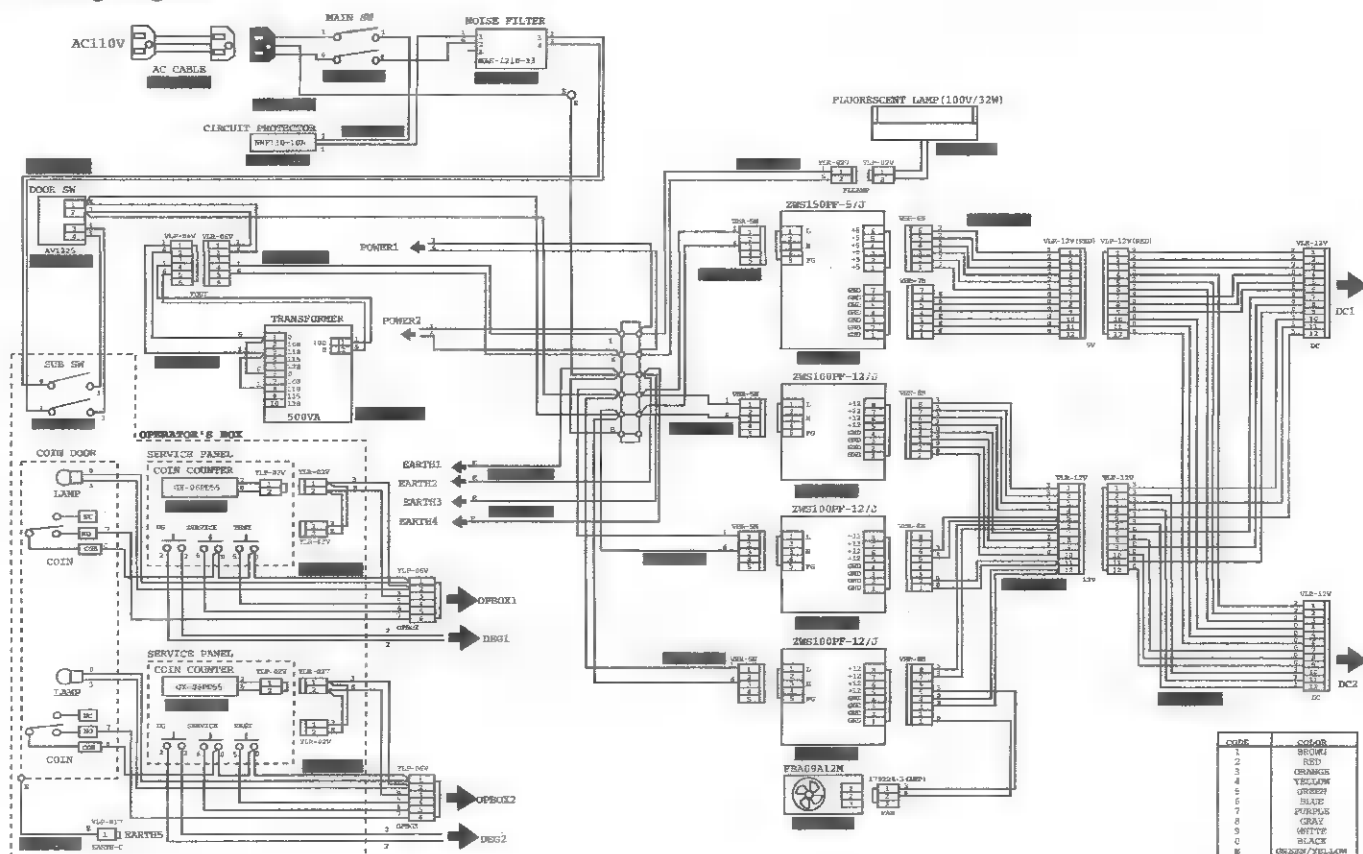


■ FIG.6 UNIT, ATTACHMENT



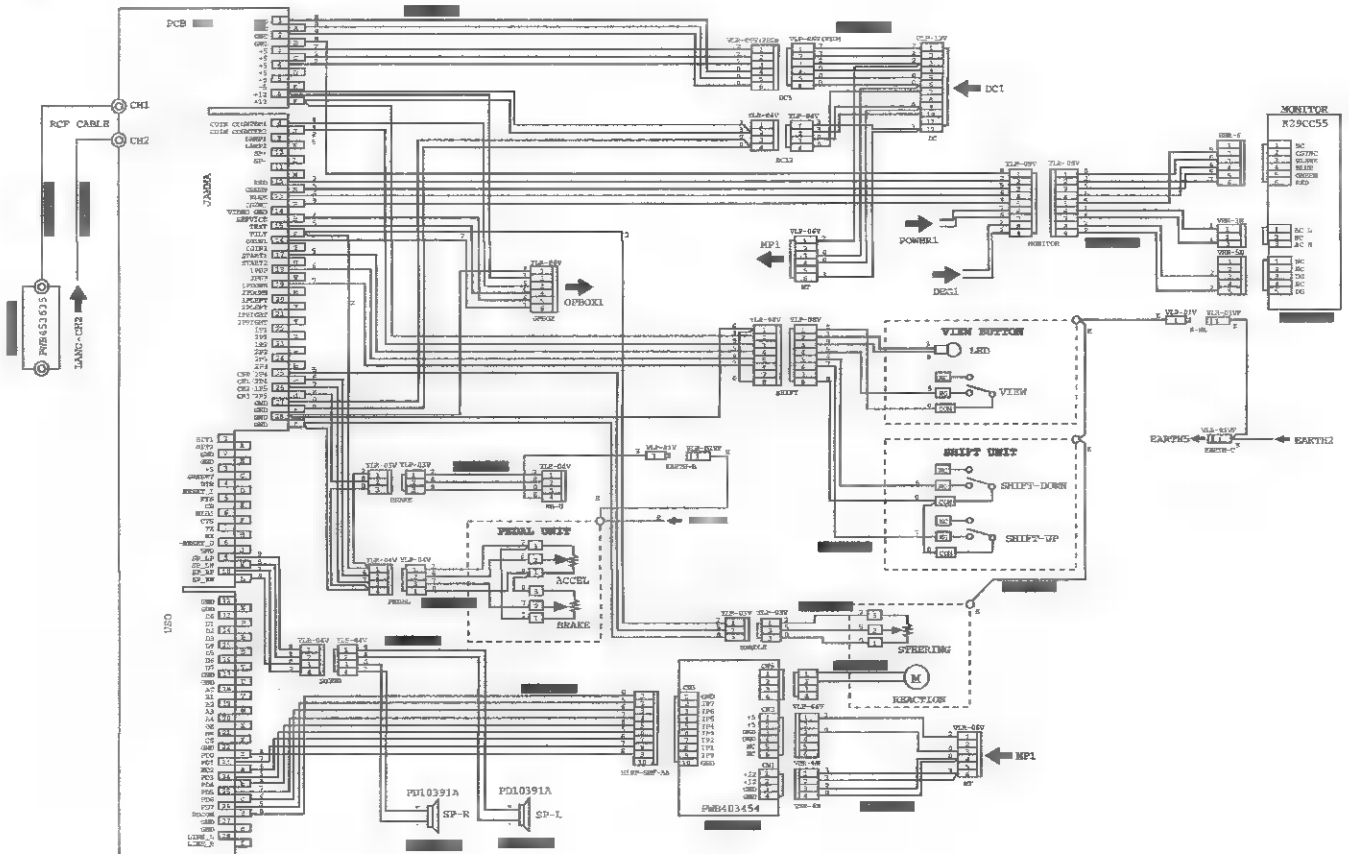
8-2 Wiring diagram

■ specifications ■ regions using 110 voltage ■ ■ 1/3



Wiring diagram (1P)

specifications for regions using voltage

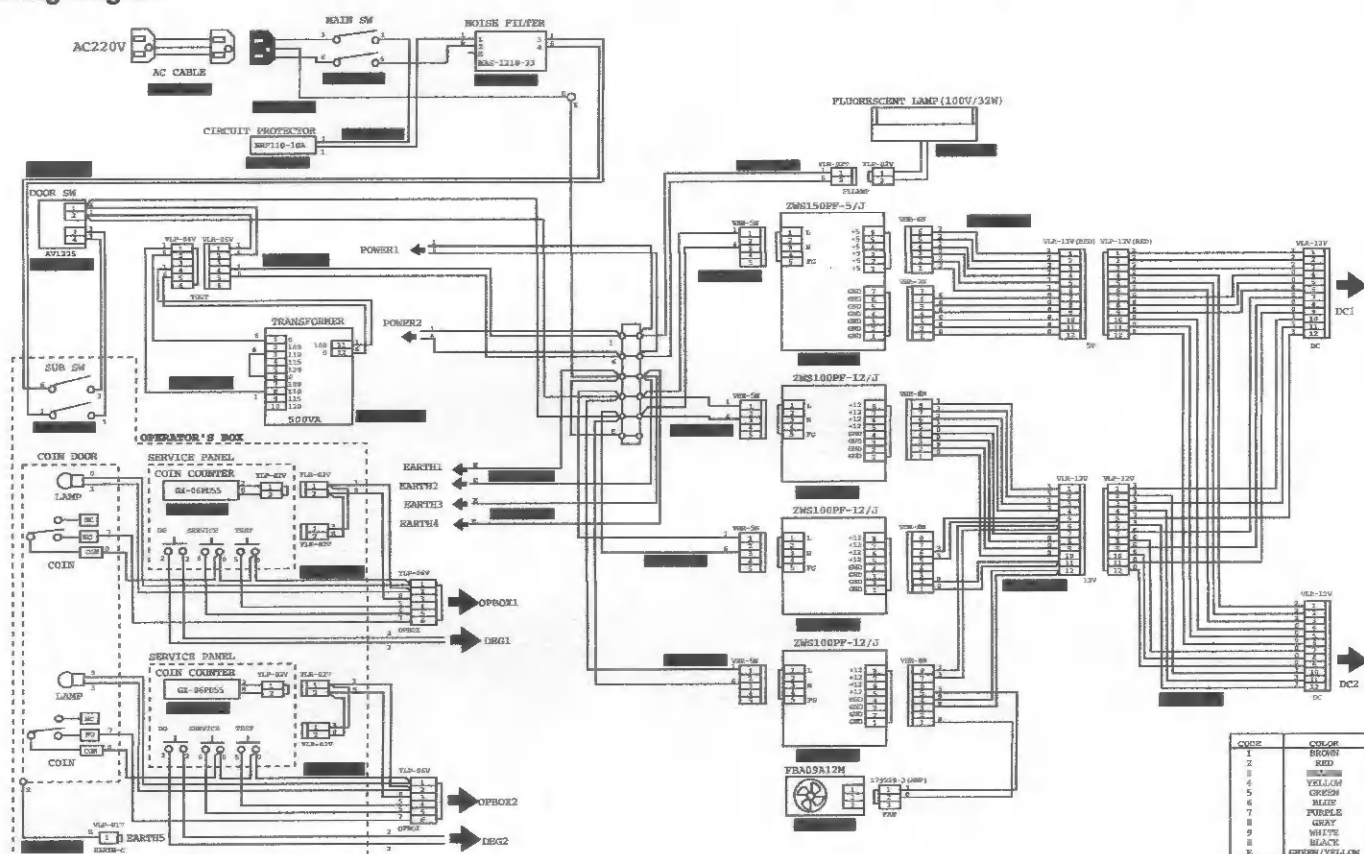


GMA41-TE specifications for regions using 110 voltage area in Asia. 2/3



Wiring diagram

GMA41-HD specifications for regions using 220 voltage area in Asia. 1/3



GMA41-HD specifications for regions using 220 voltage area in Asia. 2/3

